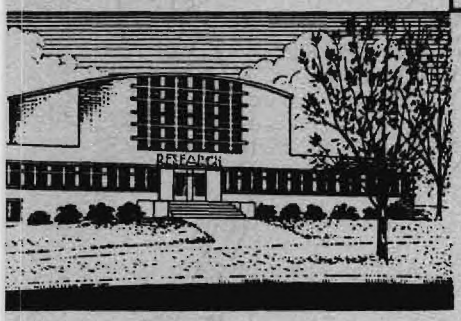
Project E-127-7

Analysis of Georgia Personal Income Payments, by Counties

by
John L. Fulmer
Project Director



Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia

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ANALYSIS OF GEORGIA PERSONAL INCOME PAYMENTS, BY COUNTIES

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Industrial Development Branch
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February, 1959

Foreword

This report of personal and per capita income for Georgia's 159 counties grows out of research extending over a period of 18 months. Like other studies of the Branch which have focused on information basic to an understanding of the State's economy, it was undertaken to produce results of value to businessmen and at the same time provide data invaluable to future industrial development research.

The previously completed commuting study, actually a part of this study, contains supplementary material collected and analyzed to provide an accurate reflection on differences in purchasing power between counties. Together, we hope the two reports will be of real value to individuals in a wide range of activities.

Where possible, Dr. Fulmer has introduced improvements in sources of data and methods in the interest of greater accuracy and completeness of the estimates. The reader's comments on these innovations, as well as on the general usefulness of the report, will be appreciated.

Kenneth C. Wagner, Head
Industrial Development Branch

ACKNOWLEDGMENTS

During the approximately 18 months this project and related work were underway, hundreds of persons in the State and the South participated in the study in many ways, by providing ideas, data, and advice. It is therefore impossible to give adequate recognition to all of them. We should like, however, to express our appreciation to the following individuals who were especially helpful in providing data and advice, often at personal sacrifice or at expense to the company or organization with which they are connected: Mr. James C. Bishop, Administrative Division, Regional Office of the Veterans' Administration; Mr. W. E. George, Executive Director, Georgia Municipal Association; Dr. John P. Gill, Director, Bureau of Business Research, College of Business Administration, University of Georgia; Dr. Robert E. Graham, National Income Division, U. S. Department of Commerce; Mr. Alton P. Jenson, Rich Electronic Computer Center, Georgia Institute of Technology; Mr. Walter Matscheck, Director of Research, Railroad Retirement Board, Chicago, Illinois; Miss Betty Peeler, Secretary-Treasurer, Association of County Commissioners of Georgia; Mr. W. L. Shadburn, State Highway Engineer, Georgia; Mr. O. H. Stephenson and Mrs. Maria M. Mallet, Reports and Analysis Section, Employment Security Agency, Georgia Department of Labor; Mr. Edwin L. Swain, Director, State Merit System of Personnel Administration; and Dr. James W. Walker, School of Mathematics, Georgia Institute of Technology.

The report benefited greatly from the criticisms and suggestions of several university professionals in the field of county income analysis. Dr. Lowell D. Ashby, Department of Economics, University of North Carolina, Dr. Wylie Kilpatrick, Bureau of Economic and Business Research, University of Florida; and Dr. Lorin A. Thompson, Director, and Dr. John Littlepage Lancaster, Bureau of Population and Economic Research, University of Virginia, gave generously of their valuable time to the critical analysis of the report. We acknowledge with pleasure the help of these scholars from southern institutions.

Our sincere appreciation is extended also to several Engineering Experiment Station Personnel. In the Industrial Development Branch, Mrs. John R. Martin assumed the responsibility for the exacting and time-consuming computations of income for Georgia's 159 counties, involving in excess of 60 separate sources of income. She also helped with the statistical analysis and graphic work in the report. Mrs. Elizabeth Morris, Mrs. Annie F. Edwards and

Mrs. Betty Jaffe did their usual superb job in getting the manuscript typed through several revisions. We are also grateful for the fine work of the staff of the Photographic Laboratory in reproducing the report in final form.

A number of the professional personnel in the Industrial Development Branch read the report editorially for methodology. In this connection we sincerely appreciate the suggestions from Dr. Kenneth C. Wagner, Head; Dr. Ernst W. Swanson, Senior Research Economist; Dr. Walter C. Kennon, Research Economist and Mr. Robert L. Bullock, Research Assistant.

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HIGHLIGHTS OF THE STUDY

In the 17-year period from 1939 to 1956, the value of goods and services, in dollars of constant purchasing power, in Georgia nearly tripled. In Fulton and DeKalb counties combined the gain was over three fold. In excess of two-thirds of personal income in Georgia was received as wages and salaries.

In 1956 wages and salaries paid workers in manufacturing amounted to nearly $1,100 million. Government wages and salaries, the second largest source of income payments, amounted to $770 million.

From 1929 to 1956 the largest relative gain among the four main components of personal income was registered by wages and salaries, which had a percentage increase from 55 per cent to 68 per cent or over one fifth gain in importance during the period. The share contributed of the total by proprietors was cut in half, while the proportion of total income originating with property declined 30 per cent. Transfer payments and other income had a four-fold gain but this components' share remains comparatively small. The decline in proprietors' and property income shares and gain the percentage of total income accounted for by wages and salaries is highly significant to growth in market demand.

The sharp drop in the share of total income distributed to proprietors was due to a decline of 72 per cent in the proportion of total income going to farm proprietors.

The ratio of total personal income derived from wages and salaries was analyzed according to population change for groups of counties. The results show that 43 counties with largest population loss had the lowest ratio of total incomes derived from wages and salaries; conversely, the 44 counties with population gain had the highest ratio of income from wages and salaries. This indicates that the relative importance of wages and salaries in total income is a key factor determining the direction in which population will move. If the percentage of total income distributed as wages and salaries is high, population will move into the area. On the other hand, if the proportion distributed as wages and salaries is low, population will move out of the area.

Comparisons of different geographic areas of the State relative to the wage and salary, and proprietors' income ratios to total income indicate that the highly developed areas have a high percentage of income from wages and salaries and a low percentage from proprietors' income. Conversely, the areas

poorly developed economically have a low ratio of total income from wages and salaries and a high ratio of total income originating with farm and nonfarm proprietors. The conclusion, therefore, is that the stage of economic development of counties in Georgia is directly related to the size of the ratio of total income derived from wages and salaries, and inversely related to the size of the ratio of total income from proprietors. Trends in population growth, therefore, are determined by the stage of economic development, as measured by the ratio of total income from wages and salaries.

From 1929 to 1956, Georgia's gain in per capita income was about the same in dollars of constant purchasing power as the United States, and the gain percentage-wise was almost twice that of the nation as a whole. From 1947 to 1956 it rose 6.0 per cent yearly; in constant 1956 dollars the rise was 3.1 per cent. Since population growth averaged about 1.2 per cent yearly during the period, the gain in productivity was about 2 per cent yearly. The productivity gain can be attributed to the rise in educational level and to improvement in industry mix towards higher wage industries.

Georgia's per capita income as a per cent of that of the United States increased from 50 per cent in 1929 to 72 per cent in 1956. While the State improved its income position nearly 45 per cent during the period, the rate of closure of the income gap was almost twice as rapid from 1929 to 1945 as from 1947 to 1956.

In 1956 only four of Georgia's counties (Chattahoochee, Cobb, DeKalb, and Fulton) were equal to or above national per capita income. These counties, however, contained 23 per cent of the State's population in 1956. Fifteen counties were within 25 per cent of the national average, and constitute 49 per cent of Georgia's population. Seventy-six or almost half of the counties had a per capita income less than 50 per cent of the average for the United States. Twenty three per cent of Georgia's population live in this group of counties.

The per capita income distribution between counties is quite wide. Only 18 counties had a per capita income equal to or above the State's average of $1,412 in 1956; State per capita income was 28 per cent below the national average. Since size of per capita income is the best single index of level of economic development, it is apparent that only 18 Georgia counties came up to the State level in economic development.

Statistical analysis of several factors against county per capita income for 1954 and 1956 produced highly significant results with four factors that

help explain why per capita income varies so greatly between counties. The average level of wages and salaries earned by industrial workers, and the percentage of income derived from wages and salaries were by far the most important factors. They were twice as important as the other two factors (per cent population employed and State per capita income) in explaining variations in county per capita income during the two years.

The importance of each of these factors in explaining the level of county per capita income is further shown by the following relationships obtained from the statistical analysis. One dollar rise in the level of industrial wages increased county per capita income 21 cents. A dollar rise in the general level of State per capita income was related to a rise of 66 cents in county per capita income. Change of one per cent in population employed added $18.86 to county per capita income, and one per cent increase in the proportion of total income derived from wages and salaries caused $11.30 rise in county per capita income.

In conclusion, Georgia has made good economic progress. The figures, however, indicate that, on any basis by which the comparisons may be made, a considerable disparity still exists with the nation; at the county level the disparities relative to the State and national per capita figures are staggering. This is emphasized by the fact that about half of Georgia's counties have less than 50 per cent as much per capita income as the nation; only 18 counties equal or exceed the State average.

A higher level of per capita income is clearly the concern of every person in Georgia. Achievement of this desirable objective depends directly on the level of economic development. The relation of per capita income to the volume of business is one of the most dependable relationships in economics. In Georgia as a whole 67 per cent of personal income goes directly into retail purchases. As the level of income is raised, retail sales will rise almost proportionately, and these increases are translated into numerous impacts on other types of business in the community.

The problem is how to secure higher per capita incomes for numerous Georgia counties. It is associated with a widespread and comprehensive program of economic development for the State. The analysis shows that high per capita incomes correspond with the highly developed economic complexes in the larger population centers; low per capita incomes are found in rural counties which have none or few large employment centers. Not only are the large employment centers generators of high economic activity but they also spread their influence to the

hinterland counties through trade, related manufacturing activities and commuting of workers. In the Atlanta area comparatively large numbers of workers commute from outlying counties, often for distances up to 60 miles in each direction daily.

Studies show that economic development in the backward counties is strongly related to exploitation of whatever resources exist in the area, or to supply activities dependent on manufacturing activities concentrated in the large population centers. Exploitation of local resources of minerals depends upon the demand for these basic materials relative to the cost of recovery. Opportunities for processing resources in forest products and farm produced raw materials depend on market demand and the market connections which can be established. Industries to manufacture supplies for farmers and other local consumers are important to development of the local economy.

Rural areas always possess a surplus of labor, adaptable, diligent, and efficient. Many rural workers will migrate; others will commute to work at distant points. The migrants can be kept at home and jobs provided also for part-time and underemployed workers if labor intensive enterprises can be attracted. Apparel manufacture is a leading example. Furniture manufacture, and pulp and paper mills are other important possibilities.

INTRODUCTION

The present report provides estimates of personal income payments by Georgia counties for the years 1954 and 1956. These data are extensions of similar data prepared by the Bureau of Business Research, College of Business Administration, University of Georgia, for the years 1939 and 1947. The concepts of "income" are slightly different[1/] while the methods employed are largely similar. Although the present estimates are slightly higher conceptually (primarily because of the inclusion of imputed rental value of owner-occupied dwellings) they are roughly comparable with the earlier figures for the purposes of economic analysis.

As employed in this report personal income payments consist of all direct wage payments, rents from property, dividends, and interest received from securities and money, earnings of proprietors of farms and independent businesses, pensions, and other strictly monetary compensations received by transfer from governments, quasi-governments, and private agencies. They also include imputed rental values placed on dwellings owned for residence, imputed value of property income withheld by insurance companies, on the account of policy holders, and the value of financial services rendered by various other financial institutions. To the farm proprietors' income component has been added an allowance for value of farm products consumed by farm families and the rental value of farm dwellings. No deductions for taxes are made except personal contributions for social insurance. The results therefore do not represent by themselves liquid purchasing power. In addition, they show the value of items from which income values flow but without market transactions. The estimates are therefore a composite of all personal income values. They put all individuals on a comparable basis in this regard.

Potential Use of Data

The income estimates of counties will prove to be of great interest to a large number of businesses and public agencies. The State Department of Revenue

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1/ The estimates prepared by the University of Georgia's Bureau of Business Research were based on the concept of total income payments to individuals. The present report, however, adopts the new concept of personal income payments employed by the Department of Commerce since 1954. It differs from the former in some minor aspects, the major one being that personal income payments include the imputed rental value of owner-occupied dwellings. The present income series is therefore somewhat higher than the one employed prior to 1954.

will have a more effective basis for estimating the effects of tax law changes. Agencies concerned with allocation of state funds will also find the data a useful index of capacity.

Private companies and state agencies engaged in industrial development, research and promotion will find the income estimates helpful in making local economic surveys, determining economic trends of counties and areas, as well as establishing reasons for changes and measuring the relative importance of shifts in economic activity. These income statistics will be valuable also in preparing marketing reports for prospective new firms.

Manufacturers, retailers, and real estate firms, and various service organizations are expected to employ them widely. Since retail sales are highly related to personal income payments, manufacturers of foods and other consumer goods will find the income data useful for measuring the market potential of sales areas, and planning more accurately sales management activities. Large retailers may in part base their advertising outlays and sales campaigns on them. Real estate agencies which specialize in shopping center locations are expected to employ the county income data in studies of sales potentials for new shopping centers. Other agencies which will find these data of interest to their activities are the Red Cross, Boy Scouts, 4-H Clubs, agencies of the Federal government conducting bond sales campaigns, and numerous others.

Nature and Sources of Data

With a few exceptions for some minor series, the data are from highly reliable sources. Over 55 per cent of the total county income payments are from sources which give directly the salary, wage payments, and other forms of compensation. These include data on: earnings of industrial workers and unemployment compensation provided by the Georgia Department of Labor; direct relief payments to persons according to county of residence by the Georgia Department of Public Welfare; wages and salaries to state employees from the board of Regents and the State Merit Board; wages and salaries of Federal civilian workers from government sources; OASI payments from Old Age and Survivors Insurance agency; and railroad retirement benefits from the Office of Director of Research, Railroad Retirement Board.

The remaining items were available from the U. S. Department of Commerce only as state totals. The state totals thus provided were allocated to the different counties on the basis of county income indicators which are highly correlated with income formation. The major items include farm proprietors' income,

earnings of unincorporated business establishments, payments to military personnel, transfer payments not accounted for above, and other labor income.

Methodology in Brief

The methods by which income estimates for each of Georgia's 159 counties were prepared are essentially the methods developed by the Conference on Measurement of County Income. The detailed procedures are given in its report: Methods for Estimating Income Payments in Counties, prepared by the Technical Committee for the use of the Conference on the Measurement of County Income, and published by the Bureau of Population and Economic Research, University of Virginia, Charlottesville, Virginia, 1952. Dr. John L. Johnson's book: Income in Kentucky, County Distributions by Amount, by Type, and by Size, particularly pages 130 to 169, provided extensive references also. Details of the methodology will be found in the Appendix of this report and in the two publications cited above.

The method consisted of crediting all direct and indirect income payments to counties and accumulating totals. Control totals for 66 income series were provided by the National Income Division of the U. S. Department of Commerce. Income payments to individuals from industries, government, and other agencies were credited as given with adjustments being made for the situs factor. The situs adjustment recognizes the difference between place of employment and place of residence. Corrections were introduced for those workers who resided outside the county of work. The number of workers involved in intercounty movement to work was determined in a special study of commuting.[1/] The calculations to adjust to county of work were programmed on the IBM 650 and worked out in detail for counties, taking into account industry type and size of firms where possible. The income items involved in this adjustment are industrial wages and salaries, pay to Federal Civilian workers, public education including state and private colleges, and all wage and salary payments to state employees. Several other direct payments to counties were credited more directly, with minor adjustments up or down being made, to cause agreement with the U. S. Department of Commerce totals. The differences were generally due to rounding. Some of the most important income items in this series are: Old Age and Survivors Insurance payments, unemployment insurance payments, railroad retirement,

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1/ Fulmer, John L., Mallet, Mrs. Maria M., and Stephenson, O. H., "Analysis of Intercounty Commuting of Workers in Georgia," Engineering Experiment Station, Georgia Institute of Technology, August, 1958.

State Welfare and relief payments.

The remaining items, representing about 45 per cent of total state personal income payments, were credited to the different counties on the basis of other county series which reflect reasonably accurately the income payments. Only economic indicators were related which were highly correlated with the income flow. Some examples are imputed rental income on owner-occupied, nonfarm dwellings which was related to the 1950 value of such structures; subsistence allowances of veterans in G. I. training, based on the actual number of veterans enrolled; military pensions and retirement pay, on the basis of number of veterans by counties, July 1, 1955; and proprietors' income of persons engaged in professional services, such as physicians, dentists, and lawyers, on the number of each class in each county adjusted for the index of earnings of the total population.

Trends In Georgia Per Capita Income

It is an accepted fact that the South is closing the income gap with the rest of the country. There is difference of opinion, however, on rapidity of gain. Since the South is less developed than the nation as a whole, and has long been an important producer of raw materials, it is obvious that war scarcities, as during World War II and the Korean War, cause a relatively greater impact on raw materials which have an inelastic supply curve. The greater effect on price of these products is transmitted to the regions' income. But it is apparent that progress in economic development is providing the biggest impetus to gains in per capita income.

Table 1 shows comparisons between per capita incomes for the United States, Southeast,[1/] and Georgia for key years from 1929 to 1956. Data are given in current prices and in 1956 dollars.

It is seen that the gain in terms of 1956 constant dollars was almost twice as rapid in both the Southeast and Georgia as the nation from 1929 to 1956; over 60 per cent greater from 1939 to 1947; and about 30 per cent greater from 1947 to 1956. It is interesting that the dollar gains were 42 to 65 dollars less than the nation in the Southeast for each period and from 10 dollars more to 45 less in Georgia. The comparatively smaller gain in the Southeast from 1947 to

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1/ Southeast includes Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee.

1956 was due to the fact that per capita income held up better in the South during the depression than for the nation. This is shown by the fact that real income advanced in the Southeast from 1929 to 1939 but fell back in the nation.

Table 1

Per Capita Income Comparisons, United States, the Southeast, and Georgia, 1929 to 1956

Year	United States		Southeast		Georgia		Georgia per capita income in percentage of U. S.
	Current Prices	1956 Dollars	Current Prices	1956 Dollars	Current Prices	1956 Dollars	
1929	703	1,114	347	550	350	555	49.8
1939	556	1,088	303	593	310	607	55.8
1947	1,316	1,601	871	1,060	884	1,075	67.2
1956	1,961	1,961	1,355	1,355	1,412	1,412	72.0
Increase in 1956 dollars:							
a. 1929 to 1956	847		805		857		--
b. 1939 to 1947	513		467		468		--
c. 1947 to 1956	360		295		337		--
Percent increase in 1956 dollars:							
a. 1929 to 1956	76		146		154		45[1/]
b. 1939 to 1947	47		79		77		20
c. 1947 to 1956	22		28		31		7

1/ The data in the last column, lower section, represent percentage increases in the ratio of Georgia's per capita income to U. S. per capita income.

The conclusion therefore is that the Southeast's gain in real income since 1929 has been substantially higher percentagewise than the nation. The additions, stated in constant dollars, have been almost as great as for the nation. In both measures Georgia's progress relative to the nation was even more rapid than the Southeast.

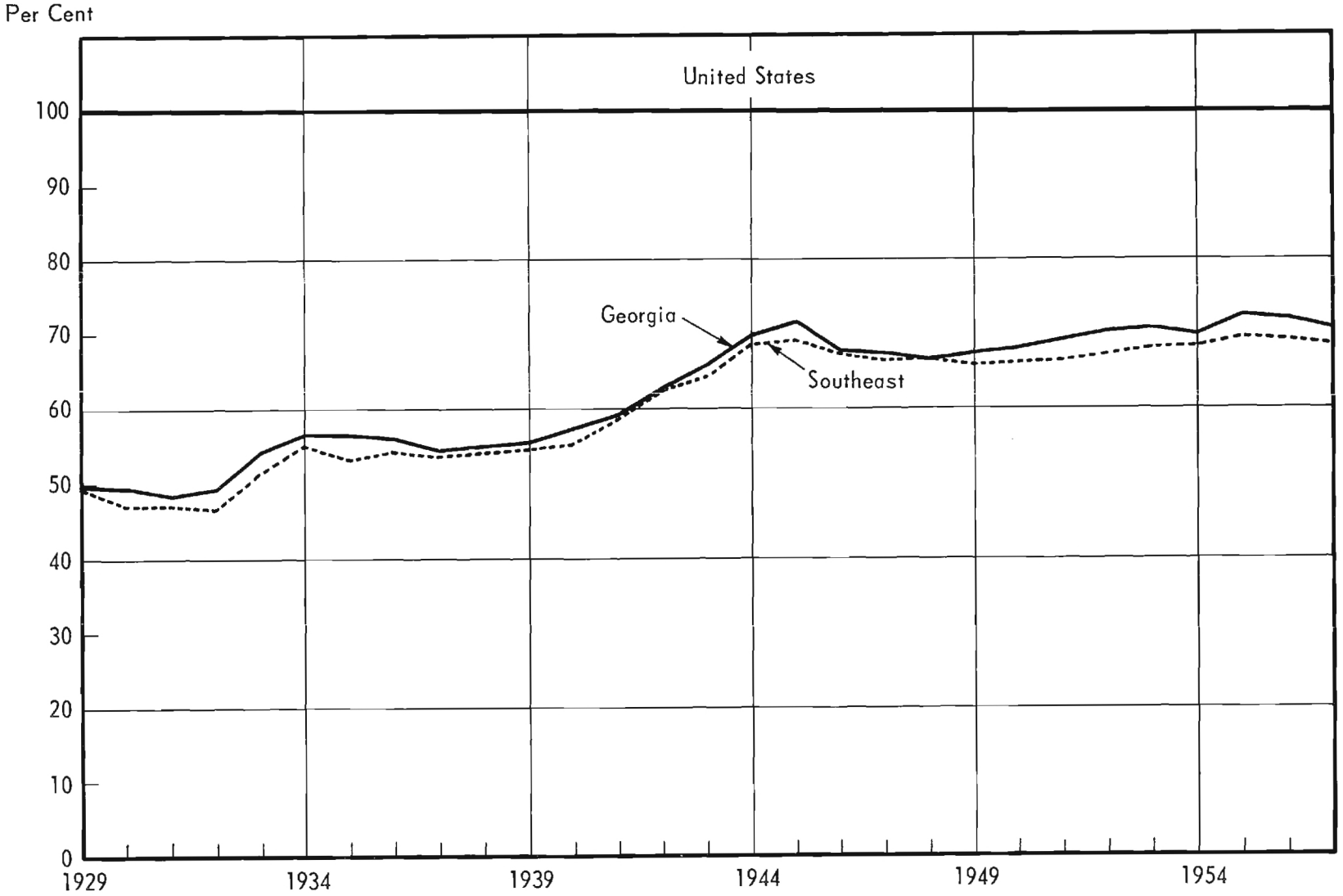
As a result of these trends the income disparity between the South and the nation has declined materially. In the table above it is shown that the incomes in Georgia closed the gap from 49.8 per cent of the nation's per capita income in 1929 to 72.0 per cent in 1956. The overall gain in relative position was almost 50 per cent.

Chart 1 shows the progress Georgia and the Southeast have made year by year since 1929 in closing the per capita income gap with the United States. The United States per capita income is shown in the chart as the horizontal line, designated as 100 per cent. The lines for the Southeast and Georgia are plotted below this "100 per cent line" and represent per capita income relative to that for the nation. In 1929, for instance, per capita income in Georgia and the Southeast was approximately 50 per cent as large as the United States. Both are plotted opposite 50 per cent, half way up the chart along the scale. The distance above these points to "the 100 per cent line" shows the income gap with the nation. From the chart it will be noted that this gap has been steadily closing.

The chart shows that the gap between per capita income in the Southeast and Georgia relative to the nation closed rapidly from 1939 to 1945. Between 1932 and 1934 there was a good gain also in the position of per capita income in both areas relative to the United States. Although closure of the gap in per capita income from 1947 to 1957 was not as rapid as during the war period, progress continued. Trend lines fitted to the 11-year period, 1947 to 1957, show the yearly gain in percentage of the nation's per capita income. For the Southeast the gain was 0.34 of a percentage point and for Georgia 0.52 of a percentage point.

During practically all of the 29-year period shown by the chart the line for Georgia's ratio to U. S. per capita income averaged about 2.5 percentage points higher than the line showing the ratio for the Southeast. Since 1947 the rate at which Georgia has closed the gap with the nation's per capita income has been distinctly more rapid than the Southeast. The yearly trend upward in the ratio to the nation's per capita income was 53 per cent higher in Georgia.

CHART 1
TRENDS IN THE PERCENTAGE RELATIONSHIP OF PER CAPITA INCOME
IN GEORGIA AND THE SOUTHEAST TO NATIONAL
PER CAPITA INCOME, 1929 TO 1957



Growth in Total Personal Income Payments

From 1939 to 1956 total income payments for Georgia increased from 967 million dollars to 5,237 million dollars. The percentage gain was 442 per cent. When these income payments, however, are corrected for the rapid rise in prices during the 17-year period, a measure of growth is obtained that is free of price inflation. The income, corrected to constant 1939 dollars, show a gain of 177 per cent. Thus the physical volume of goods and services nearly tripled during the period 1939 to 1956.

Table 2, below shows similar comparisons for Atlanta, five other counties representing Albany, Augusta, Columbus, Macon, and Savannah, and the rest of the State. As expected, Fulton and DeKalb Counties, which represent Atlanta, had a considerably higher increase than the state. In current dollars the gain from 1939 to 1956 was 527 per cent and in 1939 constant dollars, 220 per cent. Comparisons between the other five large cities and the rest of the state also show an interesting result. The rate of gain in total income for the five counties was about 10 per cent higher than Fulton-DeKalb from 1939 to 1956. However, from 1947 to 1956, the rate of gain for the five counties fell back of the rate of advance of Fulton-DeKalb. The rest of the State had the lowest percentage of gain of the three areas, a rate about three fourths that of the entire State.

County-to-county comparisons of total personal income payments reveal startling differences in the market potentials of Georgia's counties. For example, taking two extremes, Fulton and DeKalb Counties and Quitman County in a comparison of total personal income payments, a measure of the great differences in economic power between the counties of Georgia is obtained. In 1956 total personal income of the 747,000 persons in Fulton and DeKalb Counties was $1,529 million, of the 2,600 persons in Quitman County, the total personal income was $1,550 thousand. The total market power of the former is thus almost a thousand times greater and the per capita income 244 per cent higher. The comparison in total income is not exactly fair on a county basis because a two-county total is compared to a one-county total. Statistically, the two counties of Fulton and DeKalb cannot be separated satisfactorily.

Four counties (Bibb, Chatham, Muscogee, and Richmond) had personal incomes in 1956 in excess of $200 million. Cobb County was close to this category with $173 million. Dougherty and Floyd Counties had almost $100 million. Eight

Table 2

Growth in Total Personal Income Payments for
Georgia, Atlanta, Five Counties, and Rest of State
1939 to 1956

(Millions of Dollars)

Year	State		Atlanta[1]		Five Counties[2]		Rest of State	
	Current Dollars	1939 Dollars	Current Dollars	1939 Dollars	Current Dollars	1939 Dollars	Current Dollars	1939 Dollars
1939	967	967	244	244	156	156	567	567
1947	2,890	1,797	751	467	537	334	1,602	996
1954	4,414	2,283	1,269	656	944	488	2,201	1,138
1956	5,237	2,677	1,529	782	1,055	540	2,653	1,356
Per cent Increase:								
1939 to 1956	442	177	527	220	576	246	367	139
1947 to 1956	81	49	104	67	96	62	66	36

1/ Fulton and DeKalb Counties.

2/ Bibb, Chatham, Dougherty, Muscogee and Richmond Counties.

counties had total income payments over $50 million but less than $100 million. They are Clarke, Glynn, Hall, Houston, Lowndes, Troup, Walker, and Whitfield. However an additional 7 counties were close to the $50 million level of income. They are Carroll, Chattahoochee, Clayton, Colquitt, Gwinnett, Spalding, and Thomas. Thus there are 17 counties in Georgia with $50 million or over; seven other counties have almost $50 million. It is obvious that each of these 24 counties has great economic power and a large market potential, and thereby great drawing power for market oriented industries.

At the other end of the economic scale, however, there is a group of counties which carry little economic weight and, therefore, have low market potentials. According to the income calculations for 1956, 5 counties had less than $2.5 million personal income. They are: Echols, Glascock, Quitman, Taliaferro, and Webster. Another 18 counties had between $2.5 million and $5.0 million: Atkinson, Charlton, Clay, Crawford, Dawson, Lanier, Lee, Lincoln, Long, Lumpkin, Marion, Montgomery, Schley, Talbot, Towns, Truetlen, Union, and Wheeler. The total income of all 23 counties, only one less in number than the above economic giants, is only 1.6 times the total personal income of the smallest of the $50 million class. It is interesting and highly significant that 23 counties at the bottom in economic development have altogether less than twice the economic power of the least of the counties classed in the advanced stage of economic development. However, dispersed as they are, the market potential and the drawing power of all these counties for further economic development are far less than one of the better developed counties having personal income of approximately $50 million.

Sources of Personal Income Payments for Georgia and United States Compared

In Table 3 are given comparisons for major sources of income for Georgia and the United States in 1956.

Wages and salaries are disbursements made by all American employers, which includes manufacturers, construction firms, banks, insurance companies, retail stores, and numerous others. This category also includes payments to farm labor. In 1956 a net[1/] of 67.8 per cent of Georgia's personal income payments were received in the form of wage and salary payments, one per cent more than in the United States.

1/ The gross ratio of 69.5 per cent minus 1.7 per cent social insurance payments.

Table 3

Sources of Income Payments
Georgia and the United States, 1956

	Georgia		United States	
	Millions of Dollars	Per Cent of Total	Billions of Dollars	Per Cent of Total
1. Wages and Salaries, total	3,638	69.5	224.7	68.5
a. Manufacturing	1,087	20.8	77.7	23.7
b. Government	769	14.7	35.5	10.8
c. Wholesale & Retail Trade	683	13.0	40.0	12.2
d. Others	1,099	21.0	71.5	21.8
2. Proprietors' Income, total	799	15.3	42.4	12.9
a. Farm	276	5.3	11.6	3.5
b. Nonfarm	523	10.0	30.8	9.4
3. Property Income	476	9.1	40.0	12.2
4. Other Income	414	7.9	26.5	8.1
5. Less: Personal Contributions for Social Insurance	- 90	- 1.7	- 5.7	- 1.7
Total	5,237	100.0	327.9	100.0

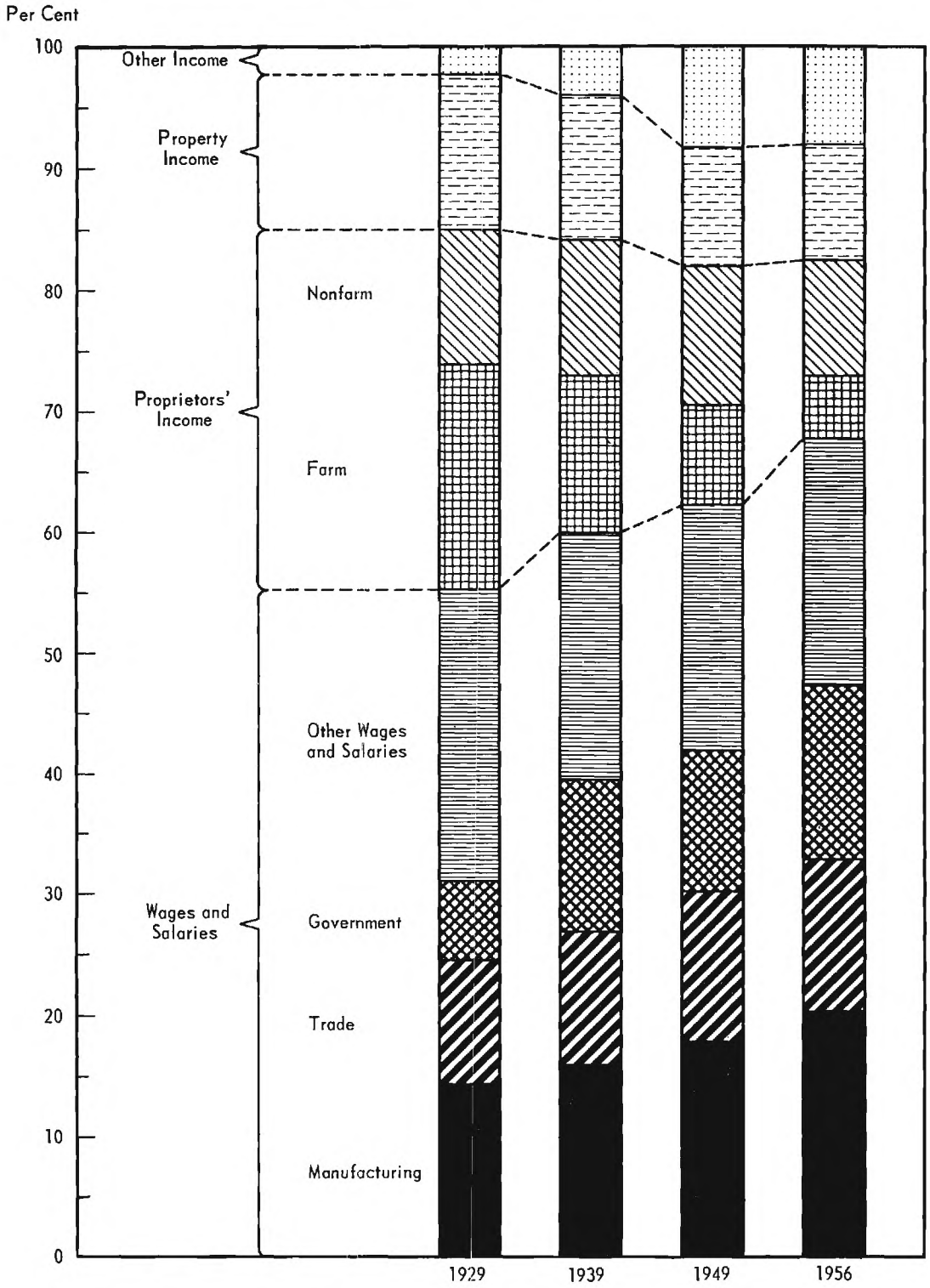
Proprietors' income is money earned by owners and operators of business and professional enterprises. Operators of private business include farmers, owners of stores, filling stations, repair shops, barber shops, service establishments and numerous other establishments. The professional category includes doctors, dentists, registered architects, and engineers and nurses. Proprietors' income is larger relatively in Georgia than the United States. In 1956 this category accounted for 15.3 per cent in Georgia; 12.9 per cent in the United States. Farm proprietors' income accounts for almost 35 per cent of proprietors in Georgia, in the United States, 27 per cent. It is over 50 per cent higher relatively in Georgia than the United States.

Property income includes returns to owners of property, such as the various types of real estate, commercial and industrial property, stocks and bonds, funds in building and loan associations, credit unions, and savings accounts in banks. The income flow is in the form of dividends, rent and interest received directly and imputed rental and interest income. Property income to persons in Georgia is relatively less important than in the United States. In 1956, 9.1 per cent of personal income payments originated with property, only 75 per cent as much relatively as in the United States.

The dividends, interest, and rents on commercial property components of property income reflect capital investment in industrial equipment and facilities. It is an accepted principle in economics that the ratio of capital to labor is an important factor in labor productivity. The fact that Georgia lags the rest of the nation, excluding the South, in the elements of property income associated with capital investment in industry indicates a relatively low ratio of capital to labor. The low capital ratio in turn is related to labor productivity which affects per capita income in the State and its counties.

Other income includes primarily transfer payments. These are social security payments, unemployment compensation, welfare support, military pensions, veterans' subsistance allowances while in G. I. schooling or training, retirement pay to civil service employees from Federal, state and local governments. It also includes business transfer payments in the form of gifts to nonprofit institutions, bad debts and other. "Other labor income," a minor component and of miscellaneous character, is likewise credited to "other income." About 8 per cent of personal income payments was accounted for by other income in 1956, with the United States having a slightly higher ratio

CHART 2
TRENDS IN RELATIVE IMPORTANCE OF MAJOR INCOME SOURCES OF GEORGIA,
1929, 1939, 1949, AND 1956



than Georgia. Because of the growing emphasis on Social Security, the size of this component has jumped sharply in the last two decades.

The items in the table in dollar value show that manufacturing was the leading source of income in Georgia in 1956, government (Federal, state and local) was second, and trade third. Government is a relatively more important source of income in Georgia than in the United States. It is highly significant that manufacturing wages and salaries in Georgia were nearly $1,100 million in 1956, over 40 per cent higher than the next most important source.

Trends in the relative importance of major income components in Georgia since 1929 are shown in Chart 2. The graph shows large shifts in the components during the period. The most striking increases were in wages and salaries and other income. The relative importance of wages and salaries rose 22 per cent during the period. Other income had a four-fold increase, but the ratio remains comparatively small. The decline in relative importance of property income and proprietors' income was especially large. The percentage contributed by proprietors' income to total personal income payments in Georgia was almost cut in half from 1929 to 1956. The proportion represented by property income declined 30 per cent.

Among the subdivisions of major income sources, the greatest increases in relative importance occurred in government, manufacturing and trade. The largest relative decrease occurred in farm proprietors' income. From 1929 to 1956, the relative contribution by governments rose 120 per cent, manufacturers 42 per cent, and trade 22 per cent. The contributions of farm proprietors declined 72 per cent.

There is danger of giving too much emphasis to shifts. Even through a major component as a subdivision may have declined it could still be larger in 1956 than in 1929. A prime example is agriculture which lost ground from 18.6 per cent of total income in 1929 to 5.3 per cent in 1956. Georgia's gross farm income has increased as follows:

	Millions of Dollars
1929	310.7
1939	229.4
1947	709.2
1956	818.9

It is seen that the value of agricultural output in Georgia grew 164 per cent from 1929 to 1956, and since 1947, the growth has been 15 per cent. While the expansion of total value of agriculture has not kept pace with the aggregate

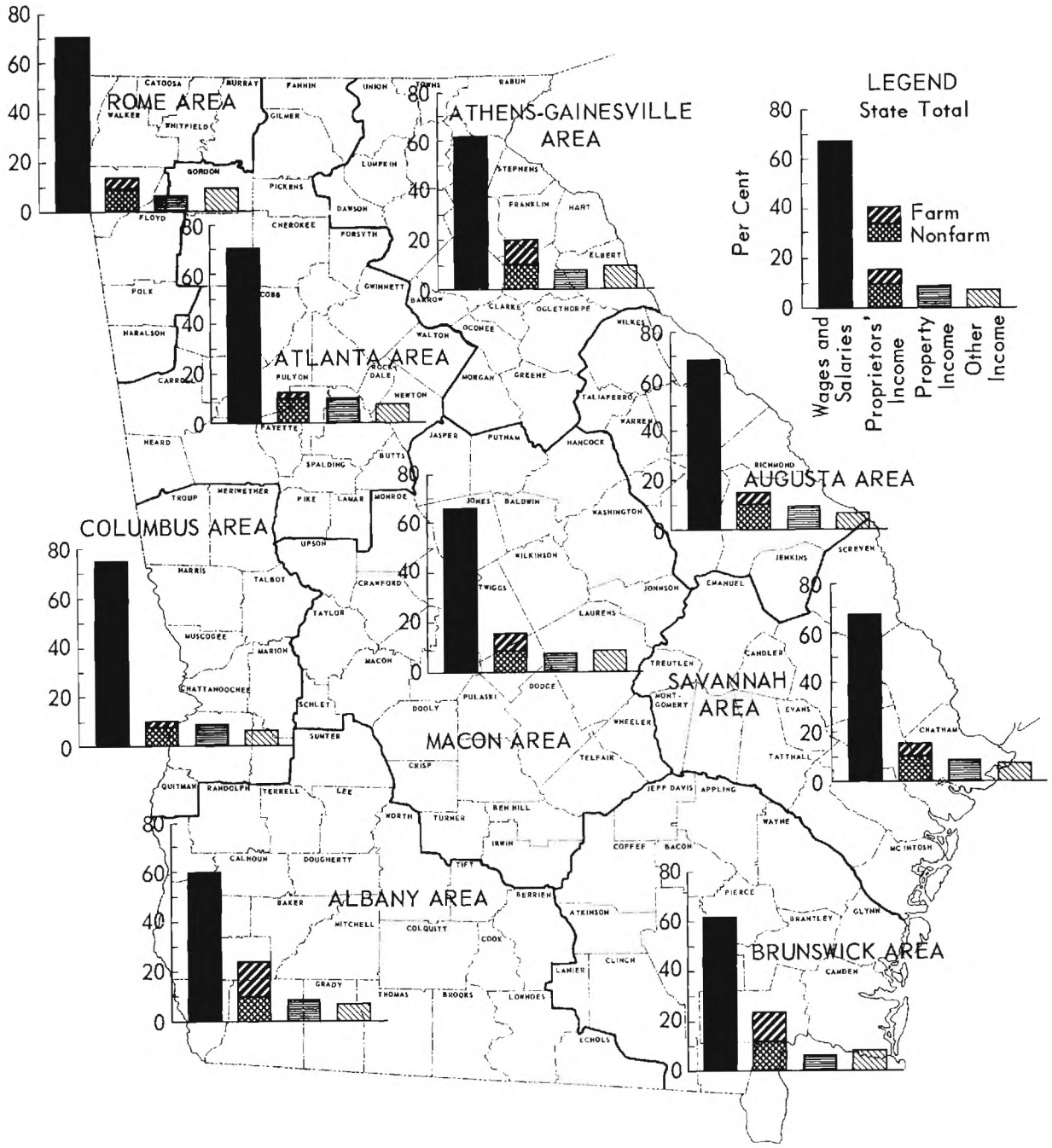
volume of business in Georgia, it is a definite and important fact that agriculture has made extraordinary progress in raising productivity and introducing mechanization of operations. This has produced a more efficient agriculture for Georgia. There is no doubt that application of science and management in agricultural operations will become even more important in the years ahead.

Variations Between Economic Areas

Chart 3 shows how income sources vary among different areas of Georgia for 1956. The two most striking features of the graphs given in each area are the long lengths of the bars which represent wages and salaries, and the variability of the bars which are for proprietors' income. The bar for wages and salaries is by far the longest. It is three times longer than the longest bar in the next leading category which is proprietors' income. It is several times longer than the bars which represent the other two categories, property income and transfer payments and other income. The greater overall length of the bars which stand for wages and salaries shows the great dominance of this category in the State's personal income payments. In 1956 about 68 per cent of personal income payments was accounted for by wages and salaries, but the proportions varied from nearly 60 per cent in the Albany area to over 74 per cent in the Columbus area. The higher proportion of total income from wages and salaries for Columbus is accounted for by the large military payrolls at Fort Benning. The relatively low proportion for Albany is offset by the relatively high percentage of total income derived from proprietors' income, especially from agriculture. In general, the graph shows that the areas of the state with the largest population centers have the highest ratio of their incomes derived from wages and salaries.

The second most striking feature of the chart is the second bar from the left. It designates proprietors' income. In addition to being the second longest bar it is also the most variable. The bar is divided into two parts. The heavy cross hatching at the bottom of the bar denotes business proprietors' income; it includes returns to proprietors of small firms and also professional classes, such as lawyers and doctors. The top part of the bar in each case is in heavy stripes. This section of the bar stands for returns to farm proprietors. Where the heavy striped section is comparatively long, it indicates that farming is important in the area. By this criterion it is found that farming as a source of income looms relatively large in Albany, Brunswick, and Athens-Gainesville areas, in that order. In these areas it is noted that the bar for

CHART 3
MAJOR SOURCES OF INCOME PAYMENTS FOR ECONOMIC AREAS, 1956



wages and salaries is short relative to the other areas of the State. This shows that agriculture is better developed and nonagricultural enterprises not as well developed as in the other sections of the State. Another conclusion is that the variability in the bar representing proprietors' income is largely due to variation in the length of that part of the bar which stands for farm proprietors' income. It is noted that variations in the proportion of income originating in agriculture is offset by opposite variations in the proportion of income accounted for by wages and salaries.

Considerable interest was aroused in the State's county population trends by Special Report[1/] No. 33 which presented population estimated for Georgia counties from 1950 to 1956-57. It was shown that 115 counties were losing population: 43 of these were losing at a rapid rate, another 72 at a moderate rate. The other 44 counties were gaining population, 19 of the counties at a quite rapid rate due to in-migration. These counties coincided very largely with the large population centers in the State.

Data which show major sources of income for these categories are given in Table 4 below:

Table 4

Proportion of Personal Income Derived from Specified Sources for Three Categories of Georgia Counties, 1956

	44 Counties with Population Increase	115 Counties with Population Decrease	
		43 Counties with Rapid Decrease	72 Counties with Moderate Decrease
Wages and Salaries	70.9%	57.0%	58.8%
Proprietors' Income			
a. Farm	1.9	17.6	14.5
b. Nonfarm	10.2	8.4	9.7
c. Total	12.1	26.0	24.2
Property Income	9.5	8.2	7.6
Other Income	7.5	8.8	9.4
TOTAL	100.0%	100.0%	100.0%

1/ Fulmer, John L., Population Estimates of Georgia Counties for 1956-1957 With Analysis of Reasons for Changes from 1950, Special Report No. 33, Engineering Experiment Station, Georgia Institute of Technology, December, 1957.

The counties with increasing population are remarkably higher in the percentage of income derived from wages and salaries. The percentage is about one-fourth higher than the 43 counties which are losing population rapidly. The 72 counties which are losing population at a moderate rate averaged about two percentage points more income from wages and salaries than the 43 counties with rapid decrease in population.

The relationship of the ratio of personal income derived from wages and salaries to the ratio derived from proprietors' income, particularly farm proprietors' income, is remarkable. First the 43 counties with largest population loss had the highest ratio, 17.6 per cent of income from proprietors; while the 44 counties with population increases had not only the smallest ratio of personal income accounted for by farm proprietors' but the ratio of 1.9 per cent was quite low by any standards of comparison. A second point is that the two ratios for farm proprietors' income and wages and salaries are complementary in that the total of both for all three categories of counties account for 83 per cent of total income. Third, the proportion of income from property income is substantially lower in the counties losing population than in the counties gaining population. This shows a lower ratio of capital to labor which influences per capita income unfavorably through its influence on labor productivity.

The inference from these comparisons is that population changes are associated with the relative size of agriculture in the county class. This conclusion is valid on its face but it is incorrect to infer from it that agriculture is in an unhealthy state. In fact the opposite conclusion is true. Rapid progress in technology and mechanization is producing larger, and more efficient farms which each year are taking on more and more the aspects of business enterprises elsewhere. The drudgery of farming is disappearing and it is being accompanied by a declining need for hand labor. Farming is therefore becoming less labor intensive and more management and capital intensive.

County Per Capita Income, 1956

General Comparisons for Counties

In 1956 Georgia's per capita income was $1,412, 72 per cent of the national average. Only four counties were equal to or above the national average in 1956. They were Chattahoochee, Cobb, DeKalb, and Fulton counties. Another fifteen counties were within 25 per cent of the national average. However, at the

other end of the ranking seventy-six or almost 50 per cent of all Georgia's counties had a per capita income in 1956 which was less than half as high as the national average. For details on the counties, see Appendix, Table 3.

The Actual variations in county per capita income in 1956 are shown in the frequency tabulation given in Table 5.

Table 5

Frequency Distribution of County Per Capita Income, in Georgia, 1956

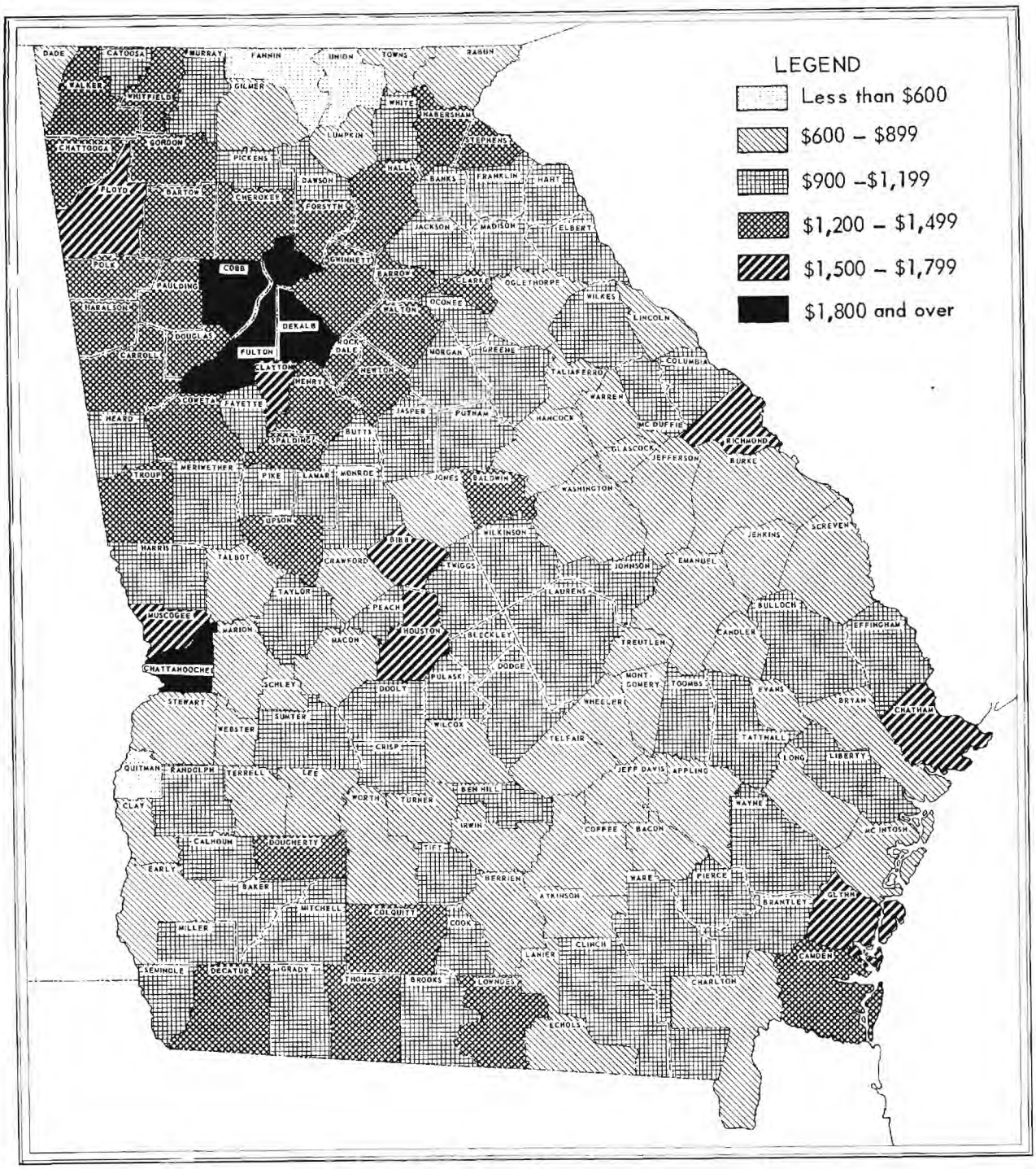
Class Interval	Number of Counties	Accumulative Frequency Inclusive of Previous Classes	Accumulative Frequency Per Cent Total
Less than 600	3	3	1.9
600 - 899	51	54	34.0
900 - 1,199	60	114	71.7
1,200 - 1,499	33	147	92.5
1,500 - 1,799	8	155	97.5
1,800 and over	4	159	100.0

It is seen that 114 of Georgia's counties (which contain 35 per cent of the population) have a per capita income which is below $1,200. The median of county per capita incomes if $1,022, and the weighted[1/] average per capita income for the State is $1,412. Eighteen counties with 49 per cent of the State's population had a per capita income in 1956 which was equal to or above the State average. This shows the influence of the relatively high per capita incomes of the heavily populated counties.

Chart 4 shows how per capita income varies in different parts of the State. High income areas correspond with large population counties. Exceptions are Chattahoochee County near Columbus and Houston County near Macon. Special circumstances cause these two variations. The high per capita incomes of Chattahoochee is determined by Fort Benning which has a high proportion of its population employed as soldiers, drawing army pay without the usual ratio of dependents. Houston County's high income is related to the large airplane modification center at Warner-Robbins. This is a high wage scale operation.

1/ Computed by dividing total state income payments for 1956 by total population.

CHART 4
VARIATIONS IN PER CAPITA INCOME OF GEORGIA COUNTIES, 1956



The most dominant feature of the map is easily seen to be the heavy incomes of counties in and around the Atlanta Metropolitan area. Is is apparent that through jobs provided for commuters, the economic impact of Atlanta extends a considerable distance into the hinterland. The chart gives a watershed effect. The high point in per capita income coincides with Cobb, DeKalb, and Fulton Counties with the shed-effect occuring in concentric zones as the distance from the Atlanta complex increases. The two fingers of high income counties, extending first toward Gainesville and Toccoa and secondly toward Athens, coincide with a string-like economic development, concentrated in the cities along highways 23 and 29 respectively. The comparatively high incomes of Chattooga, Walton, Catoosa, and some nearby counties are largely determined by the Chattanooga economic complex.

An opposite comparison is to be observed for the more distant counties. Relative to the Atlanta area, they produce a valley effect reflected by the counties with low per capita income, along the ridge line between the Savannah and Altamaha rivers, hooking Southeast of Macon in a crescent-shaped pattern. Other low income areas center around Fannin and Gilmer counties.

The groups of counties with lowest incomes correspond closely with the counties having the highest ratio of population loss, determined by analysis of population data in Special Report[1/] 33. This further confirms the thesis that people leave counties which lack economic opportunities. Low per capita incomes reflect low returns to the factors of production, land, labor, capital, and management, employed in all the economic activities and endeavors found in the county.

The conclusion from the analysis is that highest incomes are found in counties with a complex economic development and lowest per capita incomes are associated with counties that are in the early stages of economic development. It was discovered also that outlying counties are influenced by the high rate of economic output of highly developed counties industrially through income which is earned by commuters. This phenomena gave a watershed effect.

Per Capita Income of Nine Market Areas

In this section we investigate the nature of per capita income of clusters of counties or economic areas. In an earlier report[2/] the counties of

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1/ Fulmer, John L. op. cit.

2/ Georgia's New Frontiers, Special Report No. 30, Engineering Experiment Station, Georgia Institute of Technology, May 1957.

Georgia were arranged roughly into nine economic areas for comparative purposes. These areas represent a consolidation of market areas which have been employed for a number of years by organizations more strictly oriented to marketing. While the areas are not determined by intensive analysis, and therefore are the roughest sort of generalizations, they provide a basis for comparisons.

Table 6 provides per capita income for 1956 for the nine areas. In addition to showing actual dollars, the data also include a ratio to the state average per capita income in 1956, and for each area the percentage change from 1947 to 1956. Chart 3 above shows the outlines of the nine economic areas as well as the counties which constitute each area.

Table 6

County Per Capita Income for
Economic Areas, 1956

Area	Per Capita Income	Per Cent of State Average	Percentage Increase 1947 to 1956
Atlanta	1,787	127	67
Rome	1,347	95	67
Athens-Gainesville	1,176	83	65
Augusta	1,269	90	53
Macon	1,168	83	68
Columbus	1,412	100	26
Albany	1,130	80	58
Brunswick	1,084	77	88
Savannah	1,257	89	64
STATE	1,412	100	60

The data show that the Atlanta economic area has a per capita income 27 per cent above the State average. The Columbus area is equal to the State average; all other areas are below, the Brunswick Area as much as 23 per cent below state average. Other areas which are substantially lower than the state average are Albany, Macon, and Athens-Gainesville. Low per capita incomes in the hinterland counties of Macon and Albany pull these areas down relative to the State. The Atlanta and Brunswick areas represent extremes in economic development. The Atlanta area at the top, includes the highly developed metropolitan complex and numerous counties in the environs which are in a sense

integrated with industries in Atlanta; Brunswick at the low range in per capita income among the economic areas, includes no large cities. There are only Brunswick and Waycross of any consequence, each of which is not greatly in excess of 20,000 population. Except for industry in these two cities and a few other scattered points, the counties which constitute this area are in the early stages of economic development.

The last column in Table 6 shows data on the percentage increase of per capita income in each area from 1947 to 1956. The state average increase was 60 per cent in nine years. Six of the nine areas had a percentage increase greater than the State's, Brunswick almost 50 per cent higher. In this area two large plants[1/] utilize pulpwood, and the strong advances in price for lumber and other wood products have been strong factors in the relatively large gain of the Brunswick area. The Columbus area had the lowest rise during the period. Two factors stand out. One is military pay at Fort Benning which until recent years, particularly in 1957, perhaps lagged behind rises in wage scales in the economy as a whole. The other factor is the great dependence of Columbus on the textile industry whose products have not had much price rise in several years, and with a consequent small rise in wages.

The significance of the rise in Georgia's per capita income from 1947 to 1956 of 60 per cent, or over 6.0 per cent yearly, can be judged more correctly when considered in connection with price inflation during the period. During the 10-year period, 1947 to 1956, the consumers' price index increased from 95.5 to 116.2, a rise of 22 per cent. When the per capita income figures are corrected for the price change, the State's per capita income rose 31 per cent, or 3.1 per cent per year. It is seen that almost half of the gain was due to the price inflation. Nevertheless, the growth in real per capita income of 3.1 per cent per year is very healthy. Since yearly population grew at the rate of 1.2 per cent during 1950-56, the rise in productivity is close to 2 per cent yearly. Part of this increase is due to rise in the educational level and the remainder to mechanization of industry and to the improvement of industry mix, or increase in the ratio of durable goods industries which have high capital requirements relative to labor.

The situation with respect to per capita income for the two categories of counties is indicated in Table 7.

1/ Manufacturers of furniture, chemical cellulose, and apparel are in Wayne County. In Camden County there are large scale operations in kraft paper, bags and crates, and veneer plyboards.

Table 7

Per Capita Income Comparisons for
Groups of Counties, 1956

	1956 Per Capita Income		Per Cent Increase of Per Capita Income 1947 to 1956
	Actual	Per Cent of State Total	
44 counties with population increase	$1,624	115.0	59
115 counties with population decrease			
a. 43 counties with rapid decline	974	69.0	77
b. 72 counties with moderate decline	1,040	73.6	56
STATE	$1,412	100.0	60

The tabulation enables several significant conclusions. First we see the striking differential between the per capita income of 44 growing counties and the state average. The difference is over $200 or 15 per cent in favor of the growing counties. Secondly, the position of the 43 counties with rapid population loss is quite disadvantageous with respect to both the State and the 44 counties having population growth. Compared to the State average per capita income in 1956, they had over $400, or 31 per cent less per capita income. Compared to 44 counties, they had $650 or 40 per cent less per capita income.

A third important conclusion observed from the data is that the counties with rapid decrease in population had a larger percentage increase in per capita income than the other two categories of counties. This is due mainly to two factors. The first factor is rapid population decrease which has been shown elsewhere to represent the loss of low-wage, large family units. Consequently, this results in comparatively larger population loss than income loss which in effect causes some rise in per capita income. The other factor, mentioned previously, is the one relative to high raw material prices. Population loss is most heavily concentrated in rural counties, particulary those experiencing rapid mechanization. Farm raw materials produced for market had during the war comparatively large price increases which have been maintained by price supports. Since the war a further rise in prices has been obtained not directly but by a shift to new, higher valued enterprises. These are

mainly livestock and livestock products, which are high valued because they are sold more directly to consumers.

Relation of Level of County Per Capita Income to Business and Industry

It is a well-known truism that people with money make markets. For industries supplying a consumer market, the primary factors employed to determine the limits of sales territories and to set salesmen's quotas are number of consumers and the measures of purchasing power published by Sales Management magazine. For industrial products other factors must be employed.

Much has been made over the South's gain in per capita income, and its progress in closing the gap is watched with great interest. The interest, however, is not confined primarily to scientists who are interested in the region's welfare relative to other sections. Businessmen, industrialists, politicians, and others are even more avid readers of such reports. Favorable reports not only provide a firm basis, a sort of security for the present business and industrial installations but also indicate potentials for future growth. People with income have their first impact on retail sales. But this impact is only the beginning of the process. Growth in retail sales volume causes expansion in warehouses. These in turn lead to factories to supply the requirements locally. Nor is this all, as far as the manufacturing segment is concerned. Expansion of industries to supply the local market for food, clothing, and other consumer goods leads to establishment of manufacturers to supply other manufacturers with industrial supplies and intermediate products. All such expansions in warehouses, factories for manufacture of consumer goods and industrial products, lead to a corresponding development of the construction industry. In addition to construction of industrial facilities, there is strong basis for expansion of residential construction. The families (basic spending units) in the area have sufficient incomes to set aside a part of their personal incomes for residential construction. All these processes generate large employment, big payrolls, and intensive optimism in the economic potentials of the area. In general the higher the relative incomes, that is per capita incomes, the more rapid the tendency toward the balancing out process within industry. Therefore areas with high incomes have a good market to start but they will get an even better market because of the tendency of economic development to grow on itself.

In the limited nature of this report it is not possible to investigate in detail all these lines of growth for groups of counties in Georgia. However, some comparative data for Fulton-DeKalb counties, which have the highest per capita incomes for any large geographic area, will be quite revealing. Several measures of the economic importance of Fulton and DeKalb counties are given in Table 8 which follows.

Table 8

Measures of the Relative Economic Importance of Fulton and DeKalb Counties, 1954

Item	Fulton and DeKalb Counties' Share of State Total	
	Per Cent of State	Ratio Relative to Population
Population	19.4	1.00
Wage and salary outlays by State and local governments	21.9	1.13
Total personal income payments	28.7	1.48
Retail sales	30.6	1.58
Nonagricultural employment[1/]	33.4	1.72
Selected services	46.0	2.37

1/ Includes only employment covered by the Georgia Employment Security Law.

In Fulton-DeKalb counties, per capita income was $1,813, or 48 per cent above the State average. Because of the relationship of personal income to various aspects of business, the area had relatively more than the population ratio in all categories shown. The per capita percentage relationship for retail sales and selected services was higher than per capita income. Selected services is 2.37 times the population ratio and 60 per cent higher than the income ratio. Selected services as defined by the Bureau of the Census, includes the following major S.I.C. groups.

1. Hotels, rooming houses, camps, and other lodging places.
2. Miscellaneous business services (except accounting, auditing and bookkeeping.)
3. Automobile repair services and garages.
4. Miscellaneous repair services.

5. Motion pictures.

6. Other amusement and recreation services.

But the service category above does not include the important professional services, such as medical, dental, legal, educational, etc. Selected services as defined accounted for a per capita outlay of $88 for the State and $211 for Fulton-DeKalb counties. They represented 7.2 and 11.6 per cents respectively of the corresponding per capita incomes. If estimates for professional services were available, the per capita outlays would be materially higher, being concentrated more heavily in Fulton-DeKalb counties, perhaps in the same order as selected services.

Per capita retail sales, the beginning point for much of economic activity, looms especially large in Fulton-DeKalb counties. The Census reports of 1954 retail sales reveal that per capita retail sales for Georgia were $818, or 67 per cent of per capita income. In comparison per capita retail sales in Fulton-DeKalb counties averaged $1,293. This was 71 per cent of per capita income. Relative to state data, Fulton-DeKalb per capita retail sales were 58 per cent higher; in terms of the ratio to per capita income they were 6 per cent higher. Fulton-DeKalb counties have relatively higher per capita retail sales primarily because of the bigger per capita incomes but also because of the ability of the stores in these two counties to attract shoppers from nearby counties to buy fashion goods, housefurnishings, appliances, and automobiles.

It is obvious from these comparisons that there is a great deal of variability of retail sales in relation to per capita income for Georgia's counties. This is shown by the tabulation in Table 9 which relates per capita retail sales for the areas of Georgia to per capita Income.

The data show considerable variation both in the 1954 per capita retail sales and its ratio to per capita income. The highest per capita retail sales, occurred in the Atlanta area[1/] and the lowest in the Rome and Macon areas. The highest ratio to per capita income is shown for the Brunswick, Athens-Gainesville, and Albany areas, and the lowest for the Columbus area. Analysis of the variations by areas indicates that the ratio of retail sales to per capita income is highest in the areas which have the earliest stage of economic

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1/ Note that per capita retail sales are $272 lower than for Fulton-DeKalb counties. This is due to the fact that the Atlanta area includes 25 additional counties in the Atlanta hinterland which have substantially lower per capita retail sales.

Table 9

Relation of Per Capita Retail Sales to Per Capita Income for Georgia Areas, 1954

Area	Per Capita Retail Sales	Per Capita Income	Per Cent Sales are of Income
Atlanta	$1,021	$1,549	66
Rome	654	1,184	55
Athens-Gainesville	728	972	75
Augusta	803	1,150	70
Macon	665	987	67
Columbus	723	1,322	55
Albany	717	957	75
Brunswick	775	921	84
Savannah	736	1,083	68
State	818	1,222	67

development and lowest in the areas with the best balance and more mature stages of economic development.

In the analysis of per capita income, the conclusion was reached that size of per capita income increases directly with level of economic development. The size of retail sales also preserves this relationship, but relative retail sales is the reverse. The proportion of per capita income absorbed by retail sales declines with economic development. This means that retail sales increase less than proportionately with per capita income. Part of the explanation resides in the fact that, low per capita incomes are nearer the margin of subsistence and consequently a higher proportion of income must go for the necessities of life. Another part of the explanation is that all three areas with high ratio for retail sales are heavy in agriculture; wholesale outlays for agricultural production appear with retail sales when in reality they are industrial type outlays. Despite this latter factor it appears that the conclusion remains because it is in accord with expectations, namely: That undeveloped areas tend to have a higher proportion of personal incomes going into retail sales.[1/] Such areas therefore

1/ Dr. Lowell Ashby of the University of North Carolina has made an excellent suggestion which further fortifies the argument that areas backward in economic development have a high propensity to consume and therefore a low

have a lower marginal rate of savings and consequently have less capital available locally for economic and industrial development. Development efforts financed from outside the area therefore rank especially important if these areas are to make rapid progress beyond the elementary stages of economic development.

An average per capita retail sales of 67 per cent relative to per capita income for Georgia is also true of the South as a whole.[2/] The South's average propensity to purchase at retail with respect to personal income runs 9 percentage points higher than the rest of the country. This relatively higher propensity to spend at retail is a marketing factor of great potential for Georgia's and the rest of the South's industrial development.

A regression line has been fitted to the 1954 per capita retail sales and income for Georgia counties. The dependent variable was per capita retail sales and the independent was per capita income. Causation is from per capita income to per capita retail sales, because level of income is the spending power from which purchases at retail can be made. The results are plotted in Chart 5, with a sample of Georgia's 159 counties shown in the scatter in order to reflect the reliability of the regression line. The correlation analysis resulted in a correlation coefficient of +.57. It is highly significant but the independent (per capita income) explains less than 33 per cent of the variability in retail sales between counties. While this fairly small percentage determination is worthwhile, it shows that other factors influence local per capita retail sales in the various counties. The size of the city, the nature of economic organization, and progressiveness of the retailers are factors also. Others are the relative importance of food, shelter, and fuel produced at home by farmers. This factor is very important in explaining relatively low retail sales per capita in some counties. Place of work is also an important factor. Over one-sixth of Georgia's employed labor force cross a county

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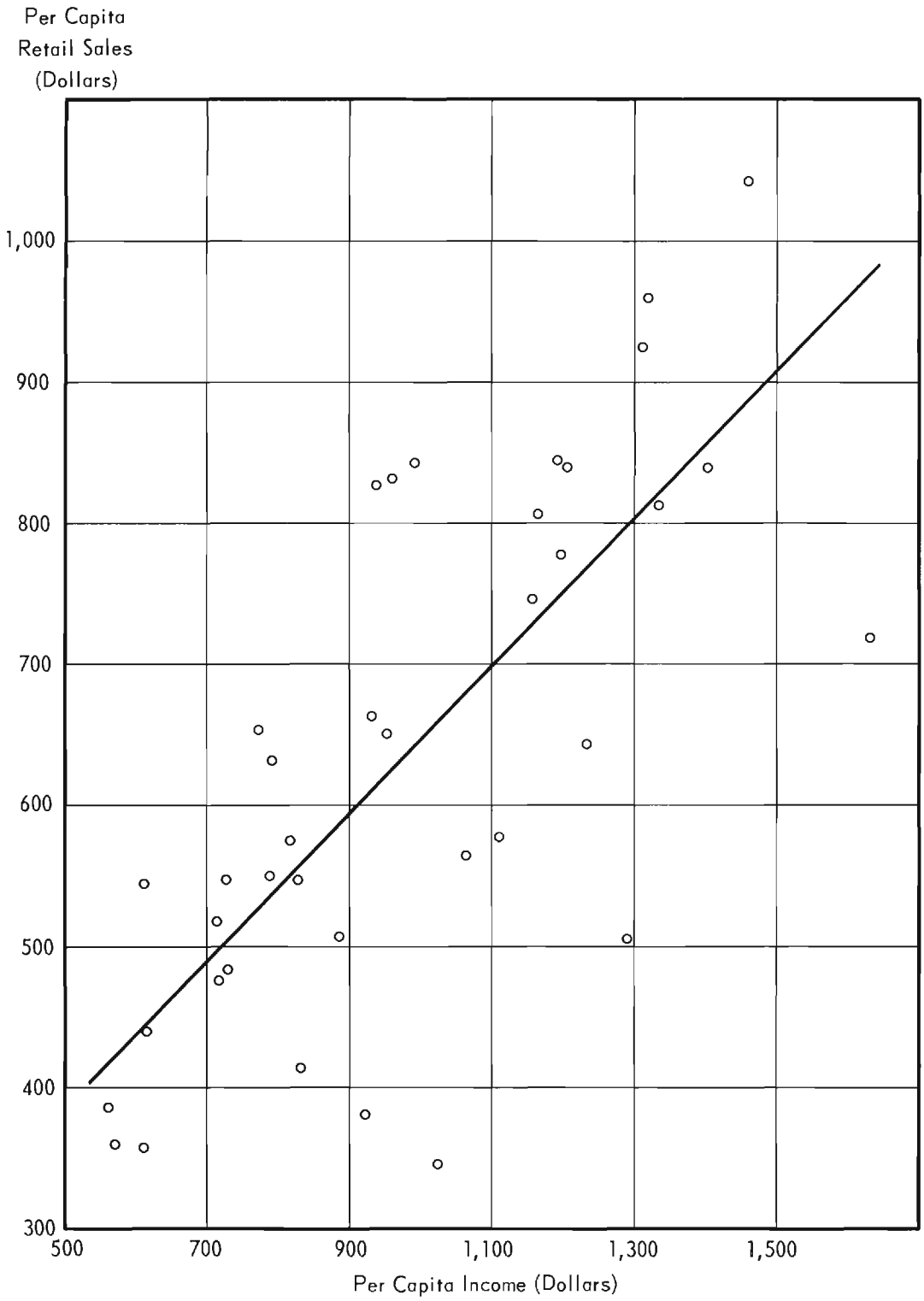
savings rate. Low economic development is characterized by a high dependence of the population on agricultural employment, as shown by the three areas under consideration. Dr. Ashby makes the point that the propensity to consume is even higher than indicated by retail purchases. This is so because in agricultural counties some food and fuel which is produced on farms is consumed directly without moving through retail channels. Although they are reflected in personal income payments by a process of imputation, they are not offset by adjustments of retail sales. On the basis of this argument, we conclude, therefore, that the ratio of personal income consumed in agricultural counties is substantially higher than indicated by the retail sales comparisons.

2/ See Fulmer, John L., "South's Retail Sales Set Pace for Nation," Manufacturers' Record, April, 1958, P. 36.

CHART 5
EFFECT OF PER CAPITA INCOME ON PER CAPITA RETAIL SALES OF GEORGIA COUNTIES, 1954



line to get to the place of work.[1/] Indications are that a good proportion of the earnings are spent in the county of work, particularly for clothing, home furnishings, appliances, and automobiles.

The analysis produced a regression coefficient of $0.54. This means for each additional dollar of per capita income an additional 54 cents would go into retail sales. This is a measure of marginal propensity to purchase at retail with respect to personal income in contrast with average propensity to purchase at retail with respect to income discussed above. Marginal propensity to purchase at retail is less than average propensity to purchase at retail because it reflects the effect on sales of additional income. It also shows by the difference (1.00 - .54) of 46 cents the amount that will be available for expenditure in selected services, professional services, recreation, travel, education, and savings for investment. All of these items reflect a progressive and growing economy. A high ratio of savings in particular is important to industrial expansion and other types of developmental activities.

1/ Fulmer, Mallett, and Stephenson, op. cit.

FACTORS INFLUENCING COUNTY PER CAPITA INCOME

Basically, the level of per capita income is a function of productivity. The more a people produce obviously the more there is for each to consume. Output per worker sounds simple but it is difficult to define and even more difficult to measure statistically. If it depended only upon direct applications of effort and thought to a given type of work, productivity could be readily visualized and easily measured. But productivity depends upon the whole cultural complex--the way a people live and think. Productivity per worker in the United States is admitted by all to be many times higher than productivity in the Middle East, or India, or China. The Middle East is in political turmoil. The other two areas are perhaps less so, but have a culture, a way of life, and a concept of being that is not conducive to energetic and aggressive enterprise. The concept of religion in India through the attitudes of some sects toward cattle and even insects, interferes directly with animal slaughter and related industries. China is regarded as the awakening giant but rapid progress is held back by worship of the past.

The form and stability of government indirectly raises output per man by providing conditions favorable to manufacture and business. There must be a minimum of interference in the operation of business, and stability in government in order that businessmen can plan ahead without interference and great uncertainty.

The educational level of a people has a bearing on productivity in numerous ways. First, the educated worker applies his manual talents to machines more skillfully and intelligently; he maintains the machines and protects his limbs with more foresight. He looks ahead and plans for the best use of machines and materials. In the case of management, this factor is even more important. Large scale enterprise, with its intricate and efficient organization depends upon trained, managers and business leaders. They are the result of the system of education, the system of government, and the religious attitudes of the people. The horizons in business are distant; they depend upon the freedom of the spirit and a concept of greatness of the individual and the country.

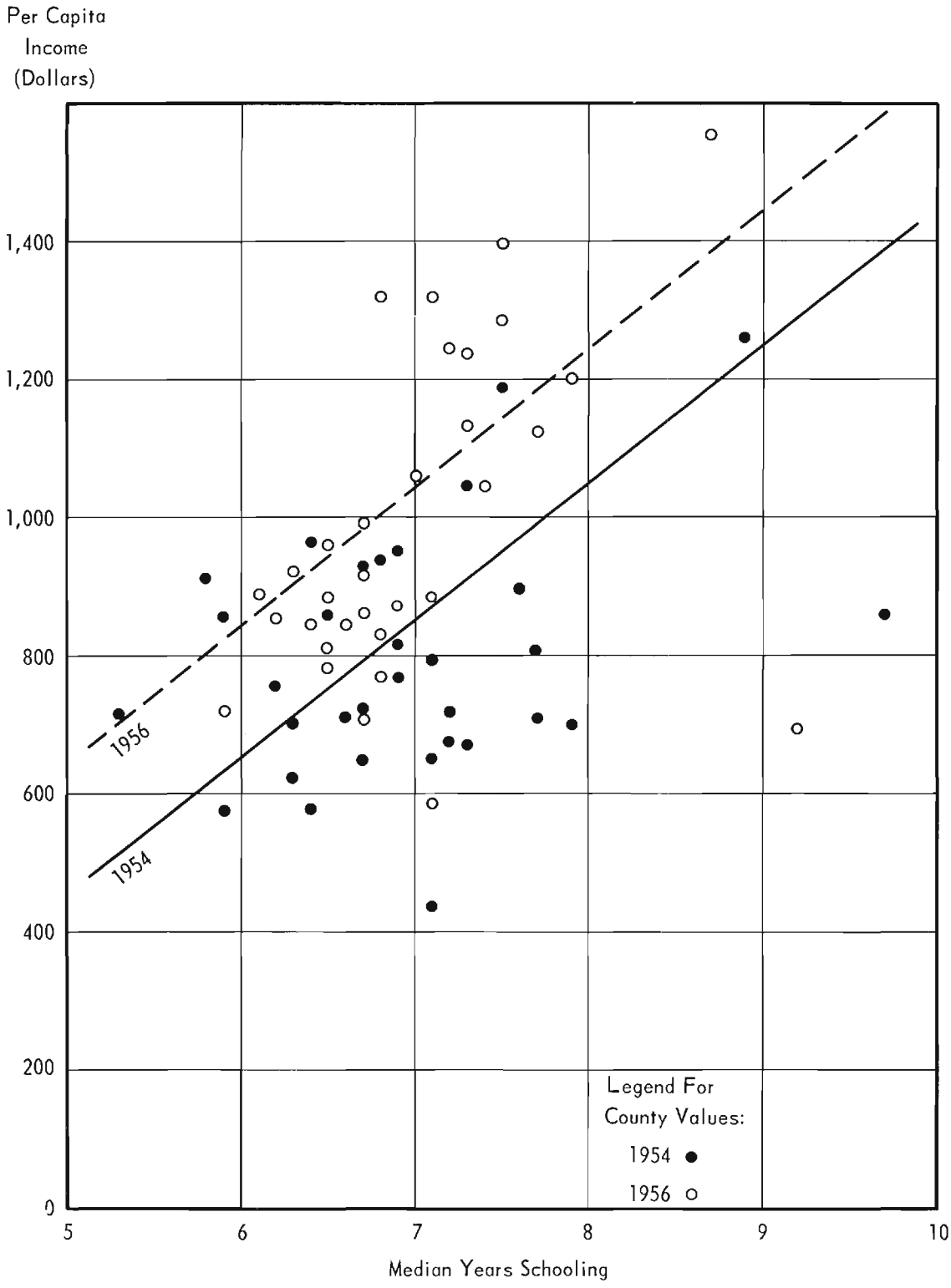
Research and development is a very important factor. As our concepts and desires, our goals and aims expand with our educational level and our attitudes. Research breaks through to new knowledge which not only moves into the frontiers

of the market place but also filters back, where basic science, management and organization are concerned, to the educational system. Research and development are a means by which individual companies lift their sights. For a nation, broadly based research and development means progressive growth and development of the economy, rising frontiers and standards of the people as a whole, and a strengthening of the basic processes of democracy. Obviously, the whole approach to discovery of truths of science in research is intimately tied in with the educational system. We conclude that a healthy business community and a healthy democracy is dependent on education.

Numerous studies have determined how yearly earnings of individuals increase with years of schooling. In this study of factors influencing county per capita income, correlation analysis has been employed to show the relationship of educational level to county per capita income for the years 1954 and 1956. A defect of the procedure is the fact that the most recent data on median years of schooling is available only for the Census of 1950. During the period 1940 to 1950, median years of schooling of adults in Georgia increased almost one year, but not uniformly for each county. The highly industrialized counties raised the educational level more than one year, while the counties backward in industrial development fell substantially below one year improvement in their educational level from 1940 to 1950. Unavailability of more recent data than 1950 on educational level reduces the effectiveness of the statistical analysis in determining the net effect of years of schooling on county per capita income. Another minor defect of the measure of educational level is that the median years of schooling, as given, pertain to adults 25 years old or over in 1950. The educational level of persons 18 to 24 years old is not reflected. This is not a serious defect in the measure, as the educational experience of this class is similar, though higher, than workers over 25 years of age. Furthermore, it is the type of defect in a factor determining county per capita income which prevails for all counties. It probably does not affect the net regression to any great extent.

The results of this analysis are graphed in Chart 6. Both 1954 and 1956 regression lines have been included. The top line is for 1956 and the lower line for 1954. A sample of counties for both years has been plotted in the chart to reflect the amount of scatter around the regression lines. The independent factor, median years of schooling in 1950, is plotted on the horizontal axis. The dependent, county per capita income, is plotted on the vertical axis. The regression lines, determined from statistical analysis, show a positive

CHART 6
RELATIONSHIP OF MEDIAN YEARS OF SCHOOLING TO COUNTY PER CAPITA INCOME, 1954 AND 1956



effect of educational level on county per capita income. The regression coefficient is $199.56 for both years. It means that each rise in the median level of education of the county of one year is associated with an increase in per capita income of almost $200. The year 1956 was a year of higher employment and higher prices compared to 1954, but it does not interfere with the relationship. These two factors are reflected in a regression line for 1956 which is about $180 above the 1954 line. But the slope of both lines is the same, which means that the educational effect on per capita income remains $200 per year of schooling for 1954 and 1956.

The correlation coefficient is +.674; this indicates, based on the coefficient of determination, that 45 per cent of the variance in county per capita income is explained by educational level and the time factor for higher prices and employment between the two years. Most of the variance explained can be credited to educational level.

The intelligence and skills of a people, provided they have attitudes of diligence and thrift, determine the efficiency of the application of management and effort to production. The marginal productivity theory of wages in economics teaches us that workers tend to be paid in accordance with their level of output. Since educational level is the basic factor determining the ability of a people and their attitudes toward work, it is concluded that educational attainment is fundamental to the level of production and personal income payments. Consequently, from the standpoint of the future of Georgia, it is obvious that if the educational level of Georgia counties could be equalized, it would remove a great deal of the per capita income differences. This certainly could not be done overnight. Public education has been available in Georgia since shortly after 1900. In the approximately 60 years since that time, the state has progressed to about 8.0 median years of schooling. From 1940 to 1950 it rose only 0.8 of a year. Raising the education level of a whole people to a high point is a tremendous task. It takes not decades, nor a generation, but several generations, and perhaps nearer a century of uninterrupted, constant effort.

Of course educational level is not the only factor determining county per capita income. The fact that it explains only 45 per cent of the variability in county per capita income emphasizes this fact. Many of the factors which account for the 55 per cent of the variation in county per capita income left unexplained are undoubtedly related to educational level. Some of the factors which are obviously related to county per capita income are rate of earnings of

industrial workers, nature of the economic organization, and percentage of the population employed. All reflect productivity of the population and indirectly the educational level. The intelligent application of manual skills and management to capital represented by machines, the result of inquiry and research, reflect the educational complex of the society where found.

The level of earnings of workers in industry, government, and business is related strongly to county per capita income. Because wages and salaries constitute 68 per cent of total personal income payments in Georgia, there is an arithmetic relationship. The whole is simply the sum of its parts. Causal relationships can be established, however, on other grounds. A high level of wages and salaries in industry establishes a competitive pattern which employers of any other type must meet. Furthermore, high wages and salaries largely determine property and proprietors' income through bidding up of rents, output of unincorporated enterprise, and professional services. This is especially true of the large population centers where annual earnings range highest due to the concentration of industry and business. For example, in 1956 wages and salaries paid industrial workers in Fulton-Dekalb Counties averaged $3,866 and in Baker County $1,967. The corresponding 1956 per capita incomes are $2,047 and $1,044.

A second factor is percentage of income derived from wages and salaries. This factor is related to county per capita income because it reflects economic organization which also is indicative of efficiency. When the ratio of income derived from wages and salaries is high, it means that a relatively large number of workers are employed by others. This implies the large corporate type of industrial organization which gains economies of scale from specialization in the managerial function. On the other hand a low percentage of income from wages and salaries indicates a high percentage of self-employed, small unincorporated manufacturers, businesses, and farmers. These industries reflect an early stage of economic development, and since neither the division of labor nor specialization is developed to any great extent little or no economies of scale are realized. This relationship is illustrated by the following comparisons. In 1956, the ratio of income derived from wages and salaries to total income in Chatham County was 72.6 per cent; in Evans, a nearby undeveloped county, it was 50.8 per cent. The corresponding county per capita incomes were $1,588 and $821.

The third factor, percentage of population employed, is an especially critical factor. Numerous studies have demonstrated its close relationship to per

capita income. It is of critical importance because of its basic nature and high significance. A high ratio of the population employed indicates a high participation of family members as wage earners. Oppositely, it also reflects persons unemployed because of age or health. In areas where the ratio of children and old people is high, the percentage employed will be low and consequently the income earned will have to be divided among more persons. In cities and highly industrialized areas where families are small and single-person income units are in comparatively large numbers, there will be a high percentage of participants in the labor force compared to the non-participants. Consequently, the income earned will not have to be spread to so many non-workers. The per capita income will be comparatively high. The effect of this factor can also be illustrated by two simple comparisons from counties in Georgia. In 1956, the percentage of the population employed in Bibb County was 39.6 per cent, or there were two workers in each five of population. Jones County, a nearby industrially undeveloped county, has a ratio of only 33.1 per cent, or about one person in three being employed. The corresponding per capita incomes are $1,502 and $823.

On the basis of these three factors (average industrial wages and salaries, percentage of income from wages and salaries, and percentage of population employed) a correlation analysis was made for the years 1954 and 1956. An additional factor, state per capita income, was included to show the effect of time on county gains in per capita income from rising trends in employment and prices. It is the same factor included in the analysis with education, discussed above. The results of these calculations are summarized in Table 10.

The summary table shows that the four factors explain 73 per cent of the variability in county per capita incomes in Georgia. Based on tests with the standard error of regression, all the regression coefficients are statistically significant at the 1 per cent point. They are therefore highly dependable. The relative importance of each of the factors to the dependent (county per capita income) is shown both by the regression coefficients and the beta coefficients. The regression coefficients show the effect on per capita income for each unit of change in the independent variable. For instance, each percentage point increase in the proportion of the population employed adds $18.86 to county per capita income. A dollar increase in industrial wages adds $0.21, and a dollar rise in state per capita income from year to year adds $0.66 to the per capita income of the various counties in Georgia. The very important ratio of income

Table 10

Summary of Correlation Results With Four Factors on County Per Capita Incomes in Georgia, 1954 and 1956

	Factor	Unit	Net Regression Coefficient, Dollars	Standard Error of Regression Coefficient	Beta Coefficient
X_2	Per cent total population employed, 1950	1 per cent point	18.862	3.226	.185
X_3	Average annual wages and salaries of industrial workers, 1954 and 1956	1 dollar	0.214	0.021	.394
X_4	Per cent income derived from wages and salaries, 1954 and 1956	1 per cent point	11.305	1.050	.402
X_5	State per capita income, 1954 and 1956	1 dollar	0.659	0.087	.229

$a = \$-1708.76$

$R^2_{1.2345} = +.7344$ $R_{1.2345} = +.8570$ $S_{1.2345} = 141.7$

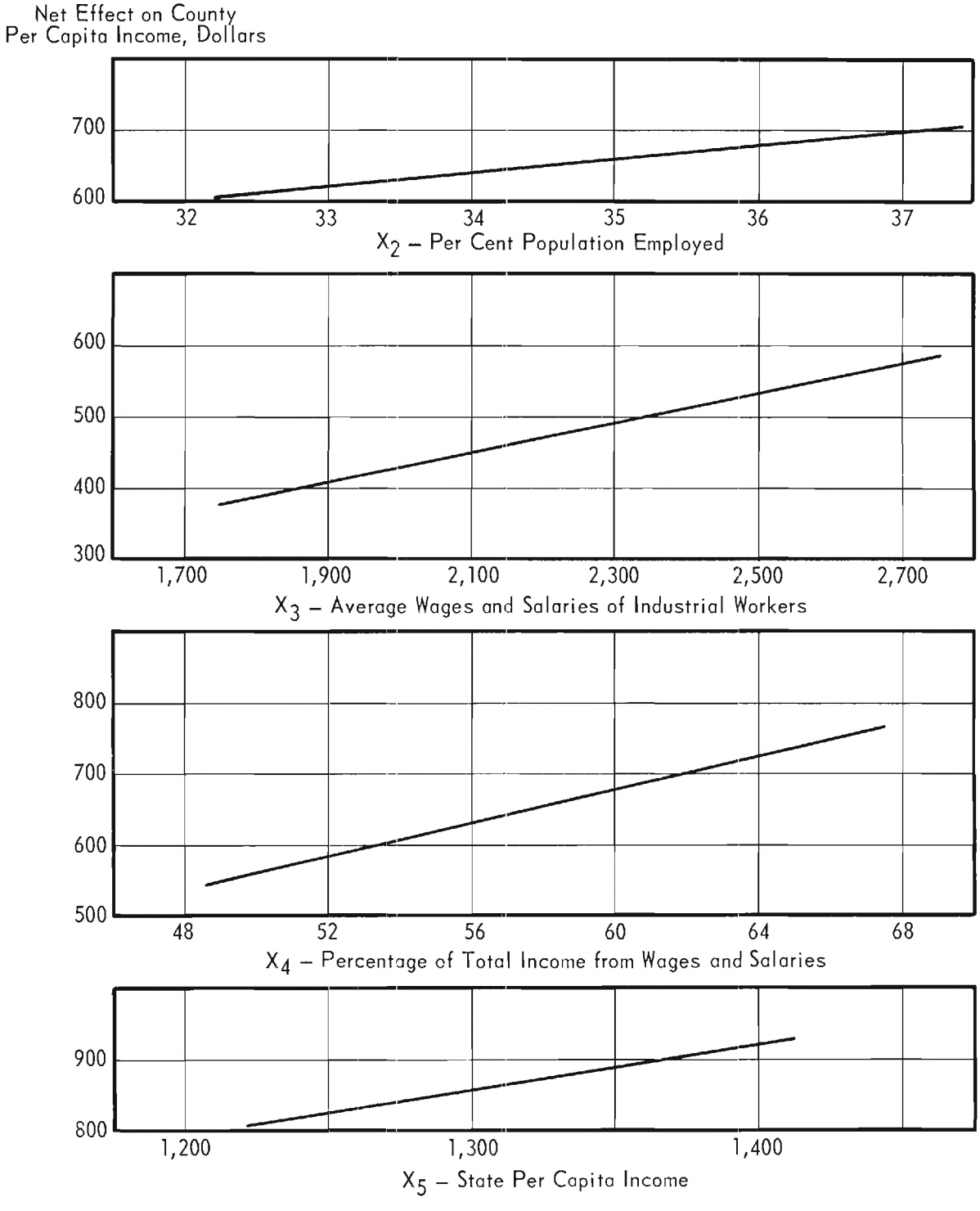
---

from total wages and salaries to total income increases county per capita income $11.30 for each percentage point increase originating with wages and salaries.

The relative importance of the different independent factors to the determination of county per capita income is shown by the beta coefficients in the last column of Table 10. The beta coefficients differ from the regression coefficients in that the former are relative to their respective standard and the comparison is therefore in terms of a common denominator. The regression coefficients deviations show absolute effects on the dependent. Comparisons in terms of the beta coefficients show that X_4, per cent income derived from wages and salaries, is the most important factor relative to variability in county per capita income. It is closely followed by X_3, average annual wages and salaries of industrial workers. Both of these factors, however, have beta coefficients roughly twice the size of the other two factors, X_2 and X_5. They are thus about twice as important in explaining the variability in county per capita income.

The relative contribution of the different independent factors to X_1, county per capita income, is illustrated in Chart 7. The graph shows the net effect on county per capita income of each variable. The independent variable in each panel has a range from minus one to plus one standard deviation. Thus with

CHART 7
NET EFFECT OF THREE FACTORS ON COUNTY PER CAPITA INCOME,
1954 AND 1956



Constant a = – $1,708.76

equal ranges in terms of standard deviation, the slopes of the regression lines are readily compared by visual inspection. Comparison of the slopes of the lines indicates that X_4, percentage of total income derived from wages and salaries, has the steepest slope, and therefore the greatest effect on county per capita income. However X_4 is but little larger in its effect on county per capita income than X_3, which makes almost as large a bound in the regression effect as X_4. X_2, per cent population employed, has about half the slope of the other two factors, and therefore only half as much influence on county per capita income as X_3 and X_4. The effect of X_5, trend over the years, on the State's per capita income is shown in the last panel. X_5 and X_2 had about the same net effect on county per capita income differences in 1954 and 1956. The net effect of one standard deviation plus or minus the mean of the different factors on county per capita income is summarized in the following tabulation:

Independent Factor	Net effect of one standard deviation plus or minus the mean of the independent variable on X_1, county per capita income, 1954 and 1956.
X_2. Per cent population employed	$100.83
X_3. Average wages and salaries of industrial workers	214.70
X_4. Percentage of total income from industrial wages	220.00
X_5. State per capita income	112.50

In addition to depicting graphically the relative importance of different factors on county per capita income, Chart 7 can be used to test the effect of a program of development on per capita income. In order to demonstrate its use for estimating purposes, we assume a hypothetical program of economic development for Johnson County. It should be emphasized that the program is assumed for illustrative purposes only. Being hypothetical, it should therefore not be misconstrued as being practical, as any development program can be selected and put into effect only after intensive analysis of the resources, and production and market capabilities of each area.

In Table 11 are given the income determining factors for 1956 in comparison with the factors which are assumed. The estimated regression effects are read directly from the regression lines in Chart 7. For example, taking the 1956

Table 11

Estimated Effect of Hypothetical Development Program on Johnson County's Per Capita and Total Income.

Regression factors	Observed values of factors 1956	Hypothetical values for factors 1956	Estimated regression effects of variable factors for: Observed values	Hypothetical values
X_2 Per cent population employed	32.9	35.9	$ 620	$ 680
X_3 Average wages and salaries of industrial workers	$2,141	$2,641	458	563
X_4 Percentage of total income from industrial wages	53.5	63.5	605	715
X_5 State per capita income	$1,412	$1,412	931	931
Constant a	--	--	-1,709	-1,709
Estimated per capita income	--	--	905	1,180
Estimated total personal income (000 dollars)	--	--	6,376	8,313
Estimated total retail sales (000 dollars)	--	--	3,755	4,896

NOTE: Per capita income was inflated to the 1956 population. Retail sales reflects the ratio to 1954 personal income.

value of X_2 as 32.9 and the assumed value of X_2 as 35.9 per cent, we read from the regression line in the top panel $620 for the 1956 actual value, and $680 for the assumed value. It is seen that per capita income would be distinctly higher if a higher percentage of the population is employed. Values for the other factors, X_3, X_4, and X_5 are read similarly from the corresponding regression lines to produce estimated regression effects for the actual value of the factors in 1956 and for the assumed values. All readings are recorded in Table 11 and summed to get the per capita income estimates.

The effects on per capita income, total income, and retail sales are quite striking. Per capita income would be raised over 30 per cent by the assumed program, which may be considered conservative. It is to be noted that the assumed increase in X_2 is to 35.9 or about 10 per cent. Assumed increases for

X_3 and X_4 are larger, being 23 and 19 per cent respectively.

Since population is assumed constant at the 1956 actual figures, the computed effects on total personal income and retail sales are the same as the increase in per capita income, or 30 per cent. This assumption as to population change is unrealistic, as industrial development will be accompanied by in-migration of workers and their families. Consequently, one important effect of our industrial development program is growth in population which, reinforced by the rise in per capita income, would produce an even larger effect on total personal income payments and retail sales. In other words, from the hypothetical program outlined, the effect on per capita income is estimated at 30 per cent and on retail sales and other business in excess of 30 per cent, because of the positive effect on population increase.

The results of the analysis of income determination are mainly reflected by the coefficient of determination given at the bottom of Table 10. It is seen that the four factors explained 73 per cent of variability in county per capita income in 1954 and 1956. The ratio of 73 per cent is somewhat disappointing, yet it must be acknowledged that income determination is complex. Only recently has progress been made in explaining state per capita income differentials. Research on county income determination is even more recent. The results from the above analysis must therefore be viewed as a good foundation for further research Four factors have been definitely established and their importance shown. They add materially to the understanding of income formation in Georgia counties, and provide even at this point, a good basis for decisions on economic and industrial development programs for the state.

Technical Appendix

METHODOLOGY

According to the concept of income payments used in this report, direct and indirect income are credited to the county of residence, and not to the county of work. The items of income include wages and salaries from enterprises, Federal, State, city and county governments; proprietors' income received by individuals as head of a farm, business, or profession; property income as returns from renting lands, houses, and commercial property; ownership of stocks and bonds, time deposits in banks; transfer payments from social security, unemployment compensation, relief and other welfare benefits, veterans benefits, and railroad retirement pensions; and imputed income from farm food consumed, rental value of owner-occupied dwellings on farms, cities, and towns, and the service value of certain financial equities.

A total of 66 items were separately calculated for the 159 Georgia counties. One of these items, the industrial composite for wages and salaries, supplied by the Georgia Department of Labor, represented hundreds of income sources and reports from over 27,000 firms in the state's economy.

Situs Adjustment

In a study of commuting, released September 1, 1958,[1/] it was found that about one worker in six in industrial occupations, government, and related activities, crosses a county line to get to the place of work. Consequently, an adjustment of total wage payments for these categories was made in order to allow a proportionate share of total wages paid in the county of work to be credited to the county of residence of the commuters. The allocation was on the basis of yearly average earnings of workers in the county of employment, since no information was available to indicate a wage differential between employees residing in the county of work and employees living outside the county of work. In order to reflect fully the maximum available detail on industry class and size of firms, numerous calculations were made. They were programmed on the IBM 650.

The situs adjustment between states was computed by crediting to the workers' state of residence income earned across state lines. For income imported by Georgia residents employed in other states, the estimate was prepared by multiplying the number of workers and the average wage paid in manufacturing by employers in counties or areas of other states adjacent to Georgia where commuters work. The calculation was based on the average manufacturing wage since questionnaire returns indicated that Georgia residents were employed primarily in manufacturing. For income exported by Georgia employers to workers residing outside Georgia, the procedure was essentially the same, except the average industrial wages were multiplied by the number of workers. More details on employment conditions of workers commuting to Georgia enabled preparation of more refined estimates than were possible with the data obtained from neighboring states.

The actual wage and salary credits for each state for 1956 are shown in the tabulation below:

1/ "Analysis of Intercounty Commuting of Workers in Georgia," Industrial Development Branch, Engineering Experiment Station, Georgia Institute of Technology.

State	Income Earned: Outside State by Georgians ($000)	In Georgia by Non-Georgians ($000)	Net Loss to Other States ($000)
Alabama	$ 772	$29,424	$-28,652
Florida	258	2,321	- 2,063
North Carolina	8	917	- 909
South Carolina	13,884	11,415	+ 2,469
Tennessee	32,823	4,026	+28,797
TOTAL	$47,745	$48,103	$- 358
Estimated social insurance deductions	1,179	1,188	- 9
NET	$46,566	$46,915	$- 349

Georgians import almost as much income from nearby states as non-Georgians earned in Georgia. Wage and salary income earned by non-Georgians was only $358,000 more than that earned by Georgians. It is surprising that the difference is as narrow as it is in view of the fact that only 66 per cent as many Georgians cross to other states for jobs as non-Georgians cross to Georgia. This can be explained by the fact that comparatively higher wages are earned by Georgians in the A.E.C. plant near Augusta and in jobs in Chattanooga, the only two points where the income earned by the exchange of workers with other states is greatly in Georgia's favor.

Methods Employed in Allocating Major Sources of Income

In general the methods[2/] developed by the Conference on the Measurement of County Income for Seven Southern States were followed. Numerous deviations were employed where local data more directly related to the series were available. Since a comprehensive study on commuting of workers was available, adjustments for situs were perhaps more extensively employed than in the earlier report. In the discussion which follows, the economic factor or factors which were regarded as highly related to the income item in each case is given without direct relation to the factor used by the Conference. Reference to this report will show more specifically the differences in income determinants.

A. Wages and Salaries

Hired labor expenditures in agriculture were taken directly from the Census of Agriculture for 1954. State figures for 1956 were allocated on the same basis as 1954 actual expenditures.

Industrial wages of insured firms (8 or more workers in 1954 and 4 or more workers in 1956) were based on data on wages reported to the Georgia Department of Labor for 1954 and 1956 by counties. The county wage data were corrected for commuting by programming the statistical procedure on the IBM 650. Industrial wage classes included are mining, construction, manufacturing, selected

2/ Copeland, Lewis C., Methods for Estimating Income Payments in Counties, published by the Bureau of Population and Economic Research, University of Virginia, Charlottesville, Virginia, 1952, pp. 21-81.

classes of transportation[3/] and public utilities, trade, finance, and service. Since firms employing less than eight workers in 1954 and less than four workers in 1956 did not report under the Unemployment Insurance Program to the Georgia Department of Labor, it was necessary to prepare independent estimates for small firms. Under the Old Age and Survivors' Insurance Program, employment is reported by these smaller firms to the U. S. Department of Health, Welfare, and Education. These data by counties were used as a basis for the estimates. Wage levels reported by analogous industries to the Georgia Department of Labor provided a wage factor. The product of the number of employees in small firms by counties and the corresponding wage level of U.I. industries provided the basis for the allocation.

The service industries were regarded as remaining incomplete even after estimates were entered for firms reporting under both the Unemployment Insurance and OASI programs. Special estimates were prepared to reflect more fully domestic servants, medical and health services and nonprofit membership organizations.

The allocation for domestic servants was the number of employees in private households as reported in the Census of Population for 1950. The allocator for medical and health services came from the same source. In the case of nonprofit membership organizations, which were mainly religious bodies, current estimates of number of employees by counties for 1956 were derived by a relationship of population to number of employees by counties in the 1936 Census of religious bodies.

A number of income sources in the field of transportation are localized or are not covered under the Unemployment Insurance program of the Georgia Department of Labor. Wage and salary payments of railroads come under the Railroad Retirement Act. The state totals for 1954 and 1956 were allocated to counties on the basis of number of railroad employees reporting by county of residence in 1950. Salaries and wages paid out by local railroads and buses, water transportation, and pipeline companies tend to be concentrated in a few areas. These three categories were allocated separately from the totals for all transportation. The basis of allocation was the Georgia Department of Labor summary of covered wages in these industries by counties for the fourth quarter of 1956.

Other transportation as defined by the National Income Division includes local railways and bus lines, services allied to transportation, pipeline transportation, air transportation (common carriers), highway passenger transportation, not elsewhere classified, and water transportation. The procedures in preparing estimates for half of these categories (local railways and bus lines, pipeline transportation, and water transportation) have previously been discussed. The remaining items (services allied to transportation, air transportation, and highway passenger transportation) were treated as one category. The allocations were made to counties on the basis of the total number of persons reporting such occupations in the 1950 Census of Population.

Government employees include four main categories--Federal civilian employees, military forces, state employees, and employees of municipalities and county governments. Wages and salaries for Federal civilian employees were

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3/ Excludes railroads, water transportation, pipe lines, and services allied to transportation. Separate calculations for all these classes were made by counties.

allocated on the basis of wage and salaries paid in various counties in the first three quarters of 1957. The situs adjustment was made. Pay to part-time workers in the post office for Christmas mail was determined independently on the basis of the 1957 payrolls by cities. Pay to rural mail carriers was estimated independently. State totals for 1954 and 1956 were allocated on the basis of county rural population for 1950.

Wages and salaries to military personnel were allocated on the basis of station strength for 1956. Special adjustments were introduced for Fort Benning on the basis of data on county of residence of station personnel, supplied by the Adjutant General's office at Fort Benning.

Wages and salaries to state employees involved a number of separate allocations because of the complexity of the problem. Payments to employees of the Georgia Agricultural Experiment Stations and the Agricultural Extension Service were allocated according to the number of employees in the different counties. Minor adjustments were made for situs in the Atlanta area and for Spalding and Tift counties. All special commissioners, with Atlanta addresses were tabulated separately and allocated to counties in the Atlanta area. Wages and salaries of the Georgia Highway Department were available for the five divisions. These totals were allocated according to the number of employees working in each county in the division.

The merit employees of the state government, the largest group, except public education, afforded a new and highly accurate approach to county determination of wages and salaries to government workers. Accurate records are available on the wages of merit employees by county of residence. Through courtesy of the Merit Board, a special tabulation for September 1958 was provided. This was used as the basis for allocations of the 1954 and 1956 wage and salary payments to these employees.

Income by counties to teachers in public schools, employees of the Georgia Department of Education, and service and janitorial personnel of the whole public school system by counties are available from annual reports of the Department of Education to the General Assembly of the State of Georgia. Tabulations for 1955-56 provided by the National Income Division were used to allocate state totals, for the years 1954 and 1956. A situs adjustment was provided for the major centers. The University System employees were treated similarly.

The State total wages and salaries of municipalities and county governments were allocated to counties on the basis of April 1957 payrolls for counties, reported in the 1957 Census of Governments.

B. Proprietors' Income

In calculating farm proprietors' net farm income heavy reliance was placed on data from the 1954 Census of Agriculture. The basic data given in this report on receipts and expenses by counties was used to determine bench-mark data for allocating the National Income Divisions' estimates of the State's total net farm proprietors' income for 1954 and 1956 to Georgia counties. First, a residual between cash receipts of farm products and the major farm expenses was determined. The farm expenditures reflected in this residual are machine hire, hired labor, feed for livestock and poultry, gasoline and oil, fertilizer, and lime. The net cash income series by counties thus derived for 1954 was converted to a

farm basis in order to reflect trends in number of farms from 1954 to 1956. The results were adjusted to the estimates of net cash farm income for the state reported by the Crop Reporting Service for both years. The next step was to multiply by the Census number of farms in 1954 and the estimated number of farms for 1956. This gave an estimate by counties of the net cash income of farm proprietors for 1954 and 1956. To obtain proprietors' net farm income, independently derived estimates for value of farm products consumed at home, the rental value of farm dwellings, and an inventory adjustment were added. The inventory adjustments were computed in such a way as to reflect the freeze in the peach areas in the spring of 1954 and the rather severe drought in many of the state's counties in that year. The more localized drought conditions of 1956 were likewise reflected in the inventory adjustments for 1956.

Nonfarm Proprietors' income includes two major components. One component represents income of professional people, such as physicians, nurses, lawyers, dentists, engineers, registered architects, etc.; the other is composed of earnings of owner-operated enterprises. A good example is retail trade which is dominated by private owners. Others are contractors, small manufacturers, personal loan service, real estate operation, and various types of service establishments, such as auto repair and barber shops, motels, etc.

The income by counties of professional persons was allocated from state totals to counties according to the number registered in each county, adjusted for the average wage level of all industrial workers in the county. The assumption was that the wage level of workers in the locality would influence both the volume of business and the charge rate of the different professional classes.

Income for proprietors of business concerns involved two procedures. Where adequate data were available, the allocation was on the basis of number of proprietors. However, for some industry classes, the data on number of proprietors were either not available or were considered an inadequate measure of share of proprietorial income. The number of workers was used as the basic allocation factor. For either procedure, however, the economic level of the county was reflected by multiplying by average wage of all industrial workers.

The allocator for retail trade and service was the number of proprietors of unincorporated business, reported in the Census of 1954 multiplied by the average county wage of all industrial workers. The allocator for manufacturing and "all other" was the number of small firms reported by the Old Age and Survivors Insurance of 0 to 7 workers in 1954 and 0 to 3 workers in 1956. No large size firm was taken in either case in order to avoid duplication of State coverage under the Unemployment Insurance Program. Both sets of data by counties, however, were multiplied by the county average wage to derive the final allocator.

For the remaining sources of proprietors' income, construction, transportation and communication, wholesale trade, and finance, insurance and real estate, the county allocator for both 1954 and 1956 was the product of the number of workers from the 1950 Census of Population and the county average industrial wage. (No more recent source of either employment or number of firms was considered sufficiently complete.) At the same time, it is to be noted that the situs problem is solved automatically since number of workers in the 1950 Census of Population are reported according to county of residence.

C. Property Income

Property income for counties was determined for monetary property income and imputed property income. The monetary income involved rents, interest, and dividends. Rental income included payments on farm and nonfarm real estate to nonfarm landlords. Rental payments to farm landlords are reflected in farm proprietors' net income. Rental value of farm real estate of off-farm landlords was allocated on the basis of total investment in land that was cash rented. On nonfarm property the allocator was determined by adding the estimated rental incomes obtained from city real estate in 1950 and from retail and other commercial establishments in 1948. Monetary interest from all sources was allocated on the basis of the value of money intangibles reported for taxation to the State in 1955. The allocator for monetary dividends was the value of stocks returned for taxation in 1955.

Imputed property income constitutes two categories--interest and rent. The allocator for net rental value of owner occupied nonfarm dwellings was the investment value of all nonfarm owner-occupied dwellings in 1950, as compiled from the Census of Housing. Imputed interest income of life insurance carriers was determined on the basis of life insurance premiums paid by counties on ordinary, industrial, and group policies in Georgia for 1955. The final item of imputed interest was for mutual savings banks, commercial banks, and other financial intermediaries. It was allocated to counties on the basis of total demand deposits.

D. Other Income

Other income includes a variety of transfer payments, such as old age and survivors' insurance, unemployment compensation, pensions and retirement benefits, and direct relief. This category also includes other labor income, a miscellaneous item which did not fit clearly under the other major components of income. Other labor income includes employer contributions to private pension and related programs, compensation for injuries, and pay to military reservists.

There are three main sources of transfer payments; namely, federal government, state and local governments, and business. The major items originating with the Federal government are O.A.S.I., railroad retirement benefits, civilian pensions, government life insurance benefits, military retirement pensions, and veterans' allowances.

Old Age and Survivors' Insurance payments are disbursed by the state through the Social Security Administration. Data on payments to residents of Georgia counties were provided by the U. S. Department of Health, Education, and Welfare through the National Income Division. State unemployment insurance benefits, under the Bureau of Employment Security, U. S. Department of Labor, are collected and disbursed by the Georgia Department of Labor. Disbursements by counties are reported annually by that agency.

Railroad retirement benefits were obtained through courtesy of the Railroad Retirement Board in Chicago, which kindly tabulated a ten per cent sample of payments to residents of Georgia cities for the month of December, 1957. These were consolidated into county totals which were used as county allocators for both years.

Federal civilian pensions and miscellaneous government transfers were allocated according to the number of federal civilian employees in Georgia counties in 1957. The number of veterans of all wars resident in Georgia counties formed the basis for allocation of government life insurance benefits and military pension and retirement payments. Veterans' allowances, primarily subsistence allowances, were credited to counties according to the number of veterans enrolled in the fall of 1956 in the different educational or training programs of the federal government for discharged veterans.

State and local government transfer payments loom large in only one category, direct relief payments, which amounted to in excess of 65 million dollars in 1956. Total disbursements by counties are published annually by State of Georgia Department of Welfare.

Business transfer payments consist of corporate gifts to nonprofit institutions, consumer bad debts, and other business transfers for cash prizes, unrecovered thefts from business of cash and capital assets, and personal injury payments from businesses other than to employees. The total of these items for Georgia were distributed to counties on the basis of industrial wage payments to counties. The allocator for other labor income, as defined above, was likewise county total industrial wage payments.

Reliability of County Estimates

Since the estimates are based on specific allocation of income for 66 major sources to Georgia's counties, measures of the reliability cannot be determined precisely by statistical methods. Analysis of the original source and method of county estimate for each income component enables preparation of a composite estimate of the error, based on separate judgements applied to both possible sources of error. This procedure indicates an overall expected error of 2.7 per cent. But its size varies considerably between components. The following tabulation for 1956 shows the differences:

Wages and salaries	1.3 per cent
Proprietors' income	7.2 per cent
Property income	6.0 per cent
Transfer payments	1.7 per cent
Composite	2.7 per cent

The mean expected error of 1.3 per cent for wages and salaries is the lowest for any component. Over two-thirds of wages and salaries are based on reports of manufacturers, Federal, and State, and local governments either to the Georgia Department of Labor or to other organizations. Only a small error exists and might have occurred in connection with the IBM adjustment for situs. This depends on the reliability in the estimates of number of commuters. Basic data for allocation of the remaining 34 per cent of wages and salaries, with a few minor exceptions, were obtained from census reports and other sources almost as reliable.

Sources of data for the major items constituting proprietors' income are reasonably good but the methods employed to make allocations to counties are not fully satisfactory. Farm proprietors' income is based on a residual method. The limited number of expenses reported in the 1954 Census by counties was deducted

from total receipts. The result, or residue, was used an allocator against the state total net cash income. Adjustments for inventory change, farm-produced food consumed, and rental value of farm dwellings were even less precise. Unusual weather conditions, such as the freeze in the peach area in the spring of 1954 and local drought conditions both in 1954 and 1956 were reflected as accurately as possible with the limited data available. Proprietors in the professions posed special problems as to number in different counties and earning rates. Proprietors of unincorporated businesses were less of a problem because of census and other reports on their number. They were adjusted for the earnings-level of wage and salary workers in the county in each case. It was considered that the error in both farm and professional proprietors would probably average about 10 per cent and of unincorporated business proprietors about 5 per cent. The tabulation shows a composite error of 7.2 per cent for this category.

The expected error of the property income component is 6 per cent. Monetary property income was more satisfactorily estimated than nonmonetary property income. For monetary dividends and interest data are available (by counties) on ownership of stocks and intangible properties. Rentals on city property was also satisfactorily allocated on the basis of rental rates reported in the 1950 Census of Housing. Rentals on farm property, paid to off-farm landlords, was also considered highly related to valuation of farm property cash rented. Nonmonetary income from rentals on nonfarm, owner-occupied dwellings and imputed interest income credited to financial intermediaries also appear soundly based. Imputed rents were based on valuation of owner-occupied dwellings. Imputed interest was based on two factors, payments of life insurance premiums and demand deposits of commercial banks. All data were available by counties.

The comparatively low error of 1.7 per cent for transfer payments, results from highly reliable sources of data for practically all the major components. O.A.S.I. payments, state unemployment disbursements, railroad retirement pensions, and welfare payments are based on annual reports giving information by counties. These items account for over half of this component. The remaining items for the most part are based on sources of information and methods which are considered highly satisfactory.

The overall favorable showing of 2.7 per cent error in the estimates is due therefore to the low errors for wages and salaries and transfer payments, both to a considerable extent based on actual reports of income by counties. Wages and salaries account for 68 per cent of Georgia's income; transfer payments for an additional 7.9 per cent.

The mean error of estimate is very valuable but a range of error is required for interpretation. To estimate this, the counties of Georgia were arrayed to show maximum and minimum proportions for each of the four income components. The error estimates for components given in the above tabulations were applied to the percentages of total income represented by each major income source. This produced a series of minima and maxima error estimates. The largest possible error of estimate according to this method was 4.4 and the smallest, 1.9 per cent. It may be taken therefore that the errors of estimate for county incomes in Georgia will vary between 2 and 5 per cent, except in unusual circumstances, such as where a large amount of commuting is involved or agriculture contributes heavily to total income. In these situations the estimated error will probably be higher.

In the original report issued by the Conference on income, estimates of error for the different components were given. Dr. Lancaster[4/] estimated that the mean error would probably be 2.5 per cent for wages and salaries, 5.0 per cent for farm proprietors' income, and 7.5 per cent for all other categories. Based on the proportions for income components for the seven southeastern states in the Conference, the composite works out to be 4.1 per cent. This compares favorably with the ratio of 2.7 per cent obtained for this study. The fact that the error in the present study is lower may be attributed to the improvement in methodology and particularly to the completeness and greater adequacy of data on income now being reported for counties.

4/ Lancaster, John L., County Income Estimates for Seven Southeastern States, a report of the Conference on the Measurement of County Income, published by the Bureau of Population and Economic Research, University of Virginia, Charlottesville, Virginia, 1952, pp. 15-20.

Appendix Table I

TOTAL PERSONAL INCOME PAYMENTS IN GEORGIA
BY COUNTY AND MAJOR SOURCES, 1956

County	Total Payments (In thousands of dollars)	Percentage Distribution by Major Source of Income					
		Net Wages & Salaries	Net Proprietors' Income			Property Income	Other Income
			Farm	Nonfarm	Total		
STATE	$5,237,000	67.7	5.3	10.0	15.3	9.1	7.9
Appling	9,246	48.0	26.9	9.6	36.5	5.6	9.9
Atkinson	4,429	37.6	33.6	10.9	44.5	7.0	10.9
Bacon	7,380	44.0	31.0	11.7	42.7	4.9	8.4
Baker	5,336	37.5	22.2	3.3	25.5	31.1	5.9
Baldwin	27,124	67.6	1.9	9.4	11.3	7.1	14.0
Banks	5,539	64.3	17.3	4.7	22.0	4.5	9.2
Barrow	17,259	60.2	12.9	11.4	24.3	7.4	8.1
Bartow	34,285	63.6	10.5	8.9	19.4	8.0	9.0
Ben Hill	13,519	57.8	8.3	13.6	21.9	9.9	10.4
Berrien	11,064	40.7	36.4	9.5	45.9	5.7	7.7
Bibb	202,972	71.9	0.5	9.6	10.1	9.1	8.9
Bleckley	9,348	58.7	15.1	7.7	22.8	9.2	9.3
Brantley	5,372	55.2	21.1	10.4	31.5	4.2	9.1
Brooks	14,475	41.6	29.7	10.6	40.3	10.0	8.1
Bryan	5,365	68.7	6.0	11.0	17.0	4.6	9.7
Bulloch	22,880	50.4	19.9	14.3	34.2	7.2	8.2
Burke	17,110	53.9	18.2	10.1	28.3	8.1	9.7
Butts	8,975	63.8	8.8	10.3	19.1	7.9	9.2
Calhoun	6,841	51.9	21.3	7.3	28.6	11.5	8.0
Camden	11,936	70.1	4.5	13.7	18.2	4.9	6.8
Candler	5,966	48.4	21.5	12.1	33.6	8.3	9.7
Carroll	45,638	67.2	7.8	9.5	17.3	5.6	9.9
Catoosa	19,372	73.6	9.2	7.7	16.9	4.6	4.9
Charlton	4,342	60.3	5.4	18.4	23.8	7.9	8.0
Chatham	294,548	72.6	0.4	9.9	10.3	9.8	7.3
Chattahoochee	40,183	95.2	0.2	0.7	0.9	3.1	0.8
Chattooga	25,372	70.7	5.2	8.0	13.2	4.9	11.2
Cherokee	27,117	64.8	10.9	8.7	19.6	6.6	9.0
Clarke	57,439	66.5	1.6	10.8	12.4	11.1	10.0
Clay	3,401	45.4	24.7	8.2	32.9	13.3	8.4
Clayton	49,906	80.8	1.6	6.2	7.8	4.6	6.8
Clinch	6,873	70.8	7.9	10.4	18.3	4.3	6.6
Cobb	173,131	78.5	1.3	8.3	9.6	5.3	6.6
Coffee	20,020	49.5	23.4	11.4	34.8	6.7	9.0
Colquitt	43,915	58.0	18.6	9.6	28.2	7.1	6.7

Appendix Table I (Continued)

TOTAL PERSONAL INCOME PAYMENTS IN GEORGIA
BY COUNTY AND MAJOR SOURCES, 1956

County	Total Payments (In thousands of dollars)	Percentage Distribution by Major Source of Income					
		Net Wages & Salaries	Net Proprietors' Income			Property Income	Other Income
			Farm	Nonfarm	Total		
Columbia	$ 11,528	68.5	5.8	11.5	17.3	5.0	9.2
Cook	10,802	44.5	27.7	10.8	38.5	7.0	10.0
Coweta	37,661	64.7	4.9	9.7	14.6	12.0	8.7
Crawford	4,581	59.1	16.8	9.6	26.4	6.9	7.6
Crisp	19,099	58.9	11.9	10.6	22.5	8.2	10.4
Dade	6,275	64.0	9.1	7.3	16.4	10.7	8.9
Dawson	2,915	38.8	36.9	8.2	45.1	7.1	9.0
Decatur	28,932	64.9	12.3	8.4	20.7	7.2	7.2
Dodge	14,539	58.0	12.1	10.9	23.0	8.1	10.9
Dooly	11,097	50.5	23.6	7.1	30.7	9.4	9.4
Dougherty	93,375	76.2	1.2	9.6	10.8	6.9	6.1
Douglas	18,459	71.8	4.8	11.1	15.9	3.6	8.7
Early	11,488	40.3	31.5	8.5	40.0	10.6	9.1
Echols	1,627	55.4	21.0	9.5	30.5	5.3	8.8
Effingham	8,391	65.1	11.0	8.8	19.8	5.4	9.7
Elbert	17,248	57.9	8.9	13.8	22.7	9.1	10.3
Emanuel	13,840	53.2	15.5	12.7	28.2	8.5	10.1
Evans	5,794	50.8	19.6	14.2	33.8	7.0	8.4
Fannin	7,376	50.1	9.3	17.6	26.9	8.3	14.7
Fayette	7,668	63.1	9.5	11.3	20.8	7.3	8.8
Floyd	97,348	70.9	2.2	9.5	11.7	7.7	9.7
Forsyth	12,421	48.0	32.4	8.7	41.1	3.8	7.1
Franklin	12,838	49.8	17.1	10.4	27.5	10.8	11.9
Fulton and DeKalb	1,529,103	69.7	0.3	11.1	11.4	11.8	7.1
Gilmer	6,859	47.6	19.7	13.6	33.3	6.5	12.6
Glascock	2,360	56.7	19.0	4.2	23.2	7.8	12.3
Glynn	55,814	72.0	1.2	11.4	12.6	8.3	7.1
Gordon	21,425	60.7	13.7	10.2	23.9	5.9	9.5
Grady	17,581	51.2	24.0	8.9	32.9	8.0	7.9
Greene	10,269	54.6	11.9	11.8	23.7	9.6	12.1
Gwinnett	47,129	70.3	5.9	9.6	15.5	5.5	8.7
Habersham	19,441	60.5	10.0	10.6	20.6	6.1	12.8
Hall	61,094	66.5	6.8	11.3	18.1	7.2	8.2
Hancock	7,197	52.5	21.9	8.2	30.1	9.0	8.5
Haralson	19,948	71.8	4.9	8.8	13.7	5.5	9.0

Appendix Table I (Continued)

TOTAL PERSONAL INCOME PAYMENTS IN GEORGIA
BY COUNTY AND MAJOR SOURCES, 1956

County	Total Payments (In thousands of dollars)	Percentage Distribution by Major Source of Income					
		Net Wages & Salaries	Net Proprietors' Income			Property Income	Other Income
			Farm	Nonfarm	Total		
Harris	11,160	65.1	6.4	8.3	14.7	11.6	8.6
Hart	13,189	51.8	21.5	9.4	30.9	6.5	10.8
Heard	5,368	55.1	18.7	11.0	29.7	5.0	10.2
Henry	18,524	67.3	9.6	6.9	16.5	8.1	8.1
Houston	51,140	84.1	3.0	3.9	6.9	3.4	5.6
Irwin	7,993	40.3	39.2	7.4	46.6	6.3	6.8
Jackson	20,495	62.8	13.1	8.2	21.3	6.1	9.8
Jasper	6,452	57.3	14.8	9.8	24.6	9.4	8.7
Jeff Davis	7,981	49.9	27.0	8.6	35.6	5.3	9.2
Jefferson	14,280	55.9	14.7	10.9	25.6	8.1	10.4
Jenkins	7,844	52.8	17.4	11.0	28.4	9.5	9.3
Johnson	8,205	53.5	21.3	7.6	28.9	7.4	10.2
Jones	6,048	68.5	7.2	7.6	14.8	7.0	9.7
Lamar	10,301	65.4	6.2	9.3	15.5	7.9	11.2
Lanier	4,386	43.7	31.4	9.7	41.1	7.2	8.0
Laurens	31,531	57.7	14.2	10.6	24.8	8.3	9.2
Lee	4,861	47.0	34.1	2.9	37.0	9.0	7.0
Liberty	10,506	72.1	6.0	9.5	15.5	3.7	8.7
Lincoln	4,392	59.2	11.3	13.1	24.4	6.9	9.5
Long	2,783	53.3	19.8	13.1	32.9	3.3	10.5
Lowndes	66,574	71.9	5.8	9.2	15.0	6.1	7.0
Lumpkin	4,757	55.7	16.5	11.4	27.9	6.7	9.7
McDuffie	14,148	69.0	6.5	10.2	16.7	6.3	8.0
McIntosh	5,233	69.4	3.6	10.2	13.8	4.6	12.2
Macon	11,264	51.1	19.9	11.0	30.9	9.8	8.2
Madison	10,482	54.9	18.7	8.4	27.1	6.1	11.9
Marion	4,625	50.1	17.2	9.8	27.0	10.4	12.5
Meriwether	18,519	61.1	13.2	9.8	23.0	6.6	9.3
Miller	6,504	42.5	33.9	7.3	41.2	8.7	7.6
Mitchell	19,072	51.4	22.6	9.3	31.9	8.4	8.3
Monroe	10,129	60.4	10.4	9.5	19.9	10.9	8.8
Montgomery	4,689	46.9	23.9	7.7	31.6	7.7	13.8
Morgan	11,806	54.9	19.5	7.8	27.3	9.1	8.7
Murray	10,976	60.7	17.8	8.0	25.8	3.9	9.6
Muscogee	247,496	76.5	0.1	8.6	8.7	9.3	5.5

Appendix Table I (continued)

TOTAL PERSONAL INCOME PAYMENTS IN GEORGIA
BY COUNTY AND MAJOR SOURCES, 1956

County	Total Payments (In thousands of dollars)	Percentage Distribution by Major Source of Income					
		Net Wages & Salaries	Net Proprietors' Income			Property Income	Other Income
			Farm	Nonfarm	Total		
Newton	$ 24,511	68.5	6.4	8.2	14.6	7.1	9.8
Oconee	6,341	58.9	19.4	8.2	27.6	4.8	8.7
Oglethorpe	6,201	55.4	19.6	5.5	25.1	9.5	10.0
Paulding	13,161	70.0	9.5	7.2	16.7	3.7	9.6
Peach	14,731	64.2	10.3	8.7	19.0	7.9	8.9
Pickens	9,840	67.0	6.9	10.0	16.9	5.3	10.8
Pierce	10.630	47.7	28.7	11.1	39.8	5.0	7.5
Pike	7,827	56.7	19.6	7.4	27.0	7.0	9.3
Polk	35,597	71.0	4.4	8.0	12.4	5.8	10.8
Pulaski	8,846	56.9	16.5	9.4	25.9	8.5	8.7
Putnam	8,057	56.5	13.9	8.8	22.7	11.2	9.6
Quitman	1,558	40.8	28.9	5.9	34.8	11.6	12.8
Rabun	5,631	56.5	10.1	12.7	22.8	7.0	13.7
Randolph	10,783	54.8	15.6	9.6	25.2	12.2	7.8
Richmond	214,071	73.0	0.3	10.4	10.7	9.9	6.4
Rockdale	11,092	69.7	5.8	9.2	15.1	6.0	9.2
Schley	2,726	49.9	22.8	7.1	29.9	10.7	9.5
Screven	11,686	57.0	14.8	9.8	24.6	8.8	9.6
Seminole	7,600	49.7	26.8	8.8	35.6	7.3	7.4
Spalding	47,333	70.8	2.1	9.6	11.7	8.2	9.3
Stephens	23,680	71.7	4.2	9.0	13.2	5.3	9.8
Stewart	6,383	47.1	21.5	7.8	29.3	14.6	8.9
Sumter	24,405	60.6	11.3	10.2	21.5	9.2	8.7
Talbot	4,963	54.6	15.4	9.0	24.4	11.6	9.4
Taliaferro	2,317	55.6	14.0	8.7	22.7	8.5	13.2
Tattnall	10,947	47.3	26.8	9.8	36.6	6.2	9.9
Taylor	7,829	56.9	16.5	9.7	26.2	7.4	9.5
Telfair	11,262	57.6	12.2	11.0	23.2	7.3	11.9
Terrell	11,327	46.9	24.2	8.4	32.6	11.1	9.4
Thomas	44,976	52.7	8.1	11.1	19.2	19.6	8.5
Tift	26,183	61.7	11.1	11.3	22.4	6.8	9.1
Toombs	16,900	56.0	11.8	15.0	26.8	7.7	9.5
Towns	3,232	53.2	19.4	10.2	29.6	4.7	12.5
Treutlen	4,305	50.0	22.8	10.4	33.2	6.4	10.4
Troup	63,368	66.4	1.9	10.7	12.6	11.5	9.5

Appendix Table I (Concluded)

TOTAL PERSONAL INCOME PAYMENTS IN GEORGIA
BY COUNTY AND MAJOR SOURCES, 1956

County	Total Payments (In thousands of dollars)	Percentage Distribution by Major Source of Income					
		Net Wages & Salaries	Net Proprietors' Income			Property Income	Other Income
			Farm	Nonfarm	Total		
Turner	$ 7,374	47.4	22.0	11.2	33.2	10.7	8.7
Twiggs	8,287	76.0	8.8	3.0	11.8	6.1	6.1
Union	3,128	43.0	23.3	14.3	37.6	5.4	14.0
Upson	31,463	71.6	2.9	8.7	11.6	7.8	9.0
Walker	57,495	74.7	3.7	9.0	12.7	5.3	7.3
Walton	21,648	62.9	12.3	7.8	20.1	7.7	9.3
Ware	36,766	65.4	5.7	12.4	18.1	7.1	9.4
Warren	6,676	55.3	16.4	11.7	28.1	7.9	8.7
Washington	15,586	53.8	14.2	9.5	23.7	11.8	10.7
Wayne	17,498	64.1	9.9	13.9	23.8	4.5	7.6
Webster	2,429	39.5	36.6	5.9	42.5	10.9	7.1
Wheeler	4,424	45.2	30.5	7.9	38.4	6.8	9.6
White	5,501	54.0	18.5	11.1	29.6	4.2	12.2
Whitfield	51,747	65.8	5.1	11.3	16.4	7.1	10.7
Wilcox	7,248	51.7	24.0	7.8	31.8	6.4	10.1
Wilkes	9,797	52.5	14.5	12.8	27.3	9.5	10.7
Wilkinson	9,666	68.2	7.7	6.7	14.4	7.0	10.4
Worth	15,055	44.3	34.8	7.5	42.3	6.1	7.3

Appendix Table 2

TOTAL PERSONAL INCOME PAYMENTS TO
INDIVIDUALS IN GEORGIA COUNTIES
1939, 1947, 1954, AND 1956

County	Total Personal Income Payments[1/] (In thousands of dollars)				Per Cent of State Total	
	1939	1947	1954	1956	1954	1956
STATE	$ 967,000	$2,890,000	$4,414,000	$5,237,000	100.000	100.000
Appling	1,926	5,684	7,502	9,246	.170	.177
Atkinson	1,038	2,851	3,875	4,429	.088	.085
Bacon	1,278	4,028	5,988	7,380	.136	.141
Baker	763	3,276	4,490	5,336	.102	.102
Baldwin	3,305	9,635	22,760	27,124	.516	.518
Banks	613	1,902	4,396	5,539	.100	.106
Barrow	3,077	8,269	14,098	17,259	.319	.330
Bartow	5,879	21,703	28,386	34,285	.643	.655
Ben Hill	4,193	12,191	11,333	13,519	.257	.258
Berrien	2,867	8,180	8,867	11,064	.201	.211
Bibb	32,433	97,723	168,721	202,972	3.822	3.876
Bleckley	1,827	5,881	7,703	9,348	.175	.178
Brantley	823	2,084	4,241	5,372	.096	.103
Brooks	3,060	10,920	11,634	14,475	.264	.276
Bryan	743	2,289	4,403	5,365	.100	.102
Bulloch	5,276	16,536	18,042	22,880	.409	.437
Burke	4,998	15,098	13,744	17,110	.311	.327
Butts	1,621	--	7,706	8,975	.175	.171
Calhoun	1,639	5,266	5,487	6,841	.124	.131
Camden	837	4,300	9,102	11,936	.206	.228
Candler	2,015	5,473	4,580	5,966	.104	.114
Carroll	6,370	18,549	37,506	45,638	.850	.871
Catoosa	1,247	4,275	16,411	19,372	.372	.370
Charlton	558	1,786	3,235	4,342	.073	.083
Chatham	49,551	150,434	256,824	294,548	5.818	5.624
Chattahoochee	8,377	17,873	41,048	40,183	.930	.767
Chattooga	6,049	19,045	21,412	25,372	.485	.484
Cherokee	3,624	19,585	23,108	27,117	.524	.518
Clarke	10,502	29,706	48,338	57,439	1.095	1.097
Clay	1,001	3,664	2,658	3,401	.060	.065

1/ The estimates for 1939 and 1947 are based on the concept of "Total Income Payments," while the estimates for 1954 and 1956 pertain to the newer concept of "Personal Income Payments." The estimates for the two different sets of years will, therefore, be slightly different. In order to understand fully the difference the reader is referred to the methodology section of the Appendix.

Appendix Table 2 (Continued)

TOTAL PERSONAL INCOME PAYMENTS TO
INDIVIDUALS IN GEORGIA COUNTIES
1939, 1947, 1954, AND 1956

County	Total Personal Income Payments (In thousands of dollars)				Per Cent of State Total	
	1939	1947	1954	1956	1954	1956
Clayton	$ 1,471	$ 9,235	$ 41,331	$ 49,906	.936	.953
Clinch	928	2,030	5,486	6,873	.124	.131
Cobb	8,434	32,782	133,419	173,131	3.023	3.306
Coffee	4,008	14,045	15,934	20,020	.361	.382
Colquitt	7,263	26,907	36,822	43,915	.834	.839
Columbia	1,156	3,595	9,911	11,528	.225	.220
Cook	2,262	6,366	8,057	10,802	.183	.206
Coweta	7,030	20,299	30,453	37,661	.690	.719
Crawford	985	3,314	3,889	4,581	.088	.087
Crisp	4,373	14,382	15,816	19,099	.358	.365
Dade	652	1,770	5,478	6,275	.124	.120
Dawson	218	2,320	2,335	2,915	.053	.056
Decatur	4,543	14,978	23,765	28,932	.538	.552
Dodge	2,906	8,764	11,991	14,539	.272	.278
Dooly	3,338	10,029	9,030	11,097	.205	.212
Dougherty	10,827	40,902	81,546	93,375	1.847	1.783
Douglas	1,644	5,533	14,577	18,459	.330	.352
Early	2,666	13,228	9,273	11,488	.210	.219
Echols	252	569	1,350	1,627	.031	.031
Effingham	1,355	3,422	6,947	8,391	.157	.160
Elbert	4,126	11,848	14,185	17,248	.321	.329
Emanuel	3,728	11,311	11,045	13,840	.250	.264
Evans	1,267	4,277	4,660	5,794	.106	.111
Fannin	1,621	5,310	6,524	7,376	.148	.141
Fayette	982	3,304	6,214	7,668	.141	.146
Floyd	21,250	53,471	82,838	97,348	1.877	1.859
Forsyth	1,253	9,969	9,694	12,421	.220	.237
Franklin	2,008	7,303	10,919	12,838	.247	.245
Fulton and DeKalb	243,839	750,966	1,268,678	1,529,103	28.742	29.199
Gilmer	999	3,396	6,174	6,859	.140	.131
Glascock	530	2,257	2,022	2,360	.046	.045
Glynn	7,654	25,113	47,666	55,814	1.080	1.066
Gordon	4,149	10,404	17,282	21,425	.392	.409
Grady	3,829	12,561	13,840	17,581	.314	.336
Greene	2,177	8,082	8,953	10,269	.203	.196

Appendix Table 2 (Continued)

TOTAL PERSONAL INCOME PAYMENTS TO
INDIVIDUALS IN GEORGIA COUNTIES
1939, 1947, 1954, AND 1956

County	Total Personal Income Payments (In thousands of dollars)				Per Cent of State Total	
	1939	1947	1954	1956	1954	1956
Gwinett	$ 4,717	$ 14,807	$ 38,241	$ 47,129	.866	.900
Habersham	2,549	10,157	15,526	19,441	.352	.371
Hall	9,457	39,612	49,041	61,094	1.111	1.167
Hancock	1,437	4,819	5,935	7,197	.134	.137
Haralson	2,520	10,841	16,882	19,948	.382	.381
Harris	1,289	3,749	9,473	11,160	.215	.213
Hart	2,161	6,288	11,006	13,189	.249	.252
Heard	587	2,218	4,493	5,368	.102	.103
Henry	2,407	8,222	14,792	18,524	.335	.354
Houston	2,599	13,422	46,570	51,140	1.055	.977
Irwin	2,285	6,805	6,338	7,993	.144	.153
Jackson	3,959	12,669	15,982	20,495	.362	.391
Jasper	1,367	4,256	5,337	6,452	.121	.123
Jeff Davis	1,194	4,082	5,920	7,981	.134	.152
Jefferson	3,814	10,954	11,954	14,280	.271	.273
Jenkins	2,223	6,148	6,231	7,844	.141	.150
Johnson	1,952	4,989	6,786	8,205	.154	.157
Jones	1,229	3,338	5,088	6,048	.115	.115
Lamar	2,182	6,105	9,285	10,301	.210	.197
Lanier	904	2,272	3,514	4,386	.080	.084
Laurens	5,962	19,439	25,288	31,531	.573	.602
Lee	1,339	3,658	3,731	4,861	.085	.093
Liberty	985	3,508	8,742	10,506	.198	.201
Lincoln	740	2,839	3,470	4,392	.079	.084
Long	410	1,191	2,252	2,783	.051	.053
Lowndes	8,466	26,211	57,741	66,574	1.308	1.271
Lumpkin	1,196	--	3,414	4,757	.077	.091
McDuffie	2,348	7,264	11,356	14,148	.257	.270
McIntosh	684	1,893	4,505	5,233	.102	.100
Macon	2,805	10,499	9,134	11,264	.207	.215
Madison	1,558	4,175	8,639	10,482	.196	.200
Marion	770	2,743	3,611	4,625	.082	.088
Meriwether	4,149	13,114	15,471	18,519	.350	.354
Miller	1,238	6,175	5,055	6,504	.115	.124
Mitchell	3,903	16,117	15,143	19,072	.343	.364

Appendix Table 2 (Continued)

TOTAL PERSONAL INCOME PAYMENTS TO
INDIVIDUALS IN GEORGIA COUNTIES
1939, 1947, 1954, AND 1956

County	Total Personal Income Payments (In thousands of dollars)				Per Cent of State Total	
	1939	1947	1954	1956	1954	1956
Monroe	$ 1,935	$ 6,033	$ 8,557	$ 10,129	.194	.193
Montgomery	1,005	2,967	3,627	4,689	.082	.090
Morgan	2,443	7,466	9,585	11,806	.217	.225
Murray	1,142	3,712	9,422	10,976	.213	.210
Muscogee	34,422	139,562	227,585	247,496	5.156	4.726
Newton	4,719	16,278	20,624	24,511	.467	.468
Oconee	899	2,708	5,008	6,341	.113	.121
Oglethorpe	1,573	4,036	5,199	6,201	.118	.118
Paulding	1,388	4,335	10,605	13,161	.240	.251
Peach	2,814	10,837	12,607	14,731	.286	.281
Pickens	1,206	4,877	8,343	9,840	.189	.188
Pierce	2,265	5,751	8,334	10,630	.189	.203
Pike	1,474	3,958	6,848	7,827	.155	.149
Polk	9,127	25,623	29,632	35,597	.671	.680
Pulaski	2,101	6,074	6,914	8,846	.157	.169
Putnam	1,624	6,087	7,014	8,057	.159	.154
Quitman	298	1,214	1,333	1,558	.030	.030
Rabun	949	2,913	4,821	5,631	.109	.108
Randolph	2,688	8,911	9,111	10,783	.206	.206
Richmond	29,257	108,220	209,298	214,071	4.742	4.088
Rockdale	1,477	5,497	8,987	11,092	.204	.212
Schley	799	2,378	2,212	2,726	.050	.052
Screven	3,175	8,832	9,729	11,686	.221	.223
Seminole	1,503	6,741	6,106	7,600	.138	.145
Spalding	11,018	31,455	40,237	47,333	.912	.904
Stephens	2,474	13,352	18,617	23,680	.422	.452
Stewart	1,600	5,317	5,271	6,383	.119	.122
Sumter	6,221	18,123	20,558	24,405	.466	.466
Talbot	1,176	3,326	4,206	4,963	.095	.095
Taliaferro	699	1,495	1,941	2,317	.044	.044
Tattnall	2,691	7,634	8,837	10,947	.200	.209
Taylor	1,622	5,350	6,536	7,829	.148	.149
Telfair	2,012	6,087	9,324	11,262	.211	.215
Terrell	3,065	10,105	9,268	11,327	.210	.216
Thomas	6,941	23,782	37,740	44,976	.855	.859

Appendix Table 2 (Continued)

TOTAL PERSONAL INCOME PAYMENTS TO
INDIVIDUALS IN GEORGIA COUNTIES
1939, 1947, 1954, AND 1956

County	Total Personal Income Payments (In thousands of dollars)				Per Cent of State Total	
	1939	1947	1954	1956	1954	1956
Tift	$ 5,212	$ 19,013	$ 21,518	$ 26,183	.487	.500
Toombs	3,040	10,819	13,415	16,900	.304	.323
Towns	263	1,058	2,799	3,232	.063	.062
Treutlen	1,005	2,327	3,432	4,305	.078	.082
Troup	14,147	46,753	57,235	63,368	1.297	1.210
Turner	2,049	6,707	6,221	7,374	.141	.141
Twiggs	1,191	4,725	6,726	8,287	.152	.158
Union	453	1,793	2,731	3,128	.062	.060
Upson	7,584	22,998	27,138	31,463	.615	.601
Walker	8,198	22,877	49,763	57,495	1.127	1.098
Walton	4,744	14,349	17,073	21,648	.387	.413
Ware	8,812	24,440	31,264	36,766	.708	.702
Warren	1,601	4,479	6,015	6,676	.136	.127
Washington	4,023	13,133	12,818	15,586	.290	.298
Wayne	2,466	7,669	13,919	17,498	.315	.334
Webster	545	2,121	1,848	2,429	.042	.046
Wheeler	946	2,494	3,252	4,424	.074	.084
White	439	2,021	4,307	5,501	.096	.105
Whitfield	9,364	27,263	42,651	51,747	.966	.988
Wildox	1,743	4,898	5,957	7,248	.135	.138
Wilkes	2,213	6,355	8,238	9,797	.187	.187
Wilkinson	2,024	7,346	8,465	9,666	.192	.185
Worth	3,334	10,958	11,521	15,055	.261	.287

Source of 1939 and 1947 income payments: Lancaster, John Littlepage, County Income Estimates for Seven Southeastern States, a report of the Conference on the Measurement of County Income, Bureau of Population and Economic Research, University of Virginia, Charlottesville, Virginia, 1952. The conference estimates for certain counties have been adjusted up for military pay in 1939 and 1947. Original data compiled by the Bureau of Business Research, College of Business Administration, University of Georgia, Athens, Georgia.

APPENDIX TABLE 3

PER CAPITA INCOME PAYMENTS
BY GEORGIA COUNTIES
1939, 1947, 1954, 1956

County	1939	1947	1954	1956	Percentage of National Per Capita Income 1954	1956
STATE	$ 310	$ 884	$1,222	$1,412	69.2	72.1
Appling	133	423	540	670	30.5	34.2
Atkinson	146	403	571	662	32.3	33.8
Bacon	158	469	699	858	39.5	43.8
Baker	104	572	856	1,044	48.4	53.2
Baldwin	137	338	1,390	1,492	78.5	76.1
Banks	70	285	796	1,001	45.0	51.0
Barrow	236	656	1,141	1,339	64.5	68.3
Bartow	232	828	1,063	1,249	60.1	63.7
Ben Hill	289	853	806	974	45.5	49.7
Berrien	187	609	691	887	39.0	45.2
Bibb	387	895	1,307	1,702	73.8	86.8
Bleckley	189	662	923	1,126	52.1	57.4
Brantley	120	340	726	931	41.0	47.5
Brooks	149	628	722	927	40.8	47.3
Bryan	118	400	721	849	40.7	43.3
Bulloch	203	694	743	975	42.0	49.7
Burke	188	670	628	819	35.5	41.8
Butts	177	---	964	1,086	54.5	55.4
Calhoun	157	526	713	938	40.3	47.8
Camden	142	610	1,155	1,318	65.3	67.2
Candler	221	710	661	882	37.3	45.0
Carroll	187	567	1,133	1,338	64.0	68.2
Catoosa	102	294	1,035	1,139	58.5	58.1
Charlton	106	385	624	804	35.3	41.0
Chatham	420	1,021	1,405	1,558	79.4	79.4
Chattahoochee	553	1,459	2,732	2,651	154.4	135.2
Chattooga	326	940	1,064	1,240	60.1	63.2
Cherokee	180	983	1,192	1,343	67.3	68.5
Clarke	370	848	1,262	1,418	71.3	72.3
Clay	142	655	549	706	31.0	36.0

Note: Per capita income was derived by dividing total personal income payments by total population (civilian and military), with corrections in the case of Baldwin, Floyd, and Tattnall counties for their relatively large institutional populations. The procedure for these three counties was to deduct institutional population from total population before deriving per capita income.

Appendix Table 3 (Continued)

PER CAPITA INCOME PAYMENTS
BY GEORGIA COUNTIES
1939, 1947, 1954, 1956

County	1939	1947	1954	1956	Percentage of National Per Capita Income 1954	1956
Clayton	$ 126	$ 415	$1,458	$1,649	82.4	84.1
Clinch	144	352	826	978	46.7	49.9
Cobb	220	549	1,631	1,983	92.1	101.1
Coffee	186	610	698	889	39.4	45.3
Colquitt	220	827	1,106	1,289	62.5	65.7
Columbia	123	394	868	933	49.0	47.6
Cook	190	542	707	955	39.9	48.7
Coweta	261	763	1,158	1,396	65.4	71.2
Crawford	138	569	703	873	39.7	44.5
Crisp	249	850	934	1,132	52.8	57.7
Dade	111	251	747	833	42.2	42.5
Dawson	49	652	735	910	41.5	46.4
Decatur	204	661	1,023	1,216	57.8	62.0
Dodge	138	512	726	928	41.0	47.3
Dooly	198	739	755	960	42.7	49.0
Dougherty	379	946	1,320	1,394	74.6	71.1
Douglas	164	474	1,151	1,393	65.0	71.0
Early	143	792	580	748	32.8	38.1
Echols	85	237	630	771	35.6	39.3
Effingham	140	391	816	990	46.1	50.5
Elbert	210	665	816	1,002	46.1	51.1
Emanuel	159	598	643	838	36.3	42.7
Evans	171	669	651	821	36.8	41.9
Fannin	110	365	503	587	28.4	29.9
Fayette	67	431	930	1,144	52.0	58.3
Floyd	379	886	1,365	1,526	77.1	77.8
Forsyth	111	946	990	1,270	55.9	64.8
Franklin	129	527	861	1,040	48.6	53.0
Fulton & DeKalb	508	1,295	1,813	2,047	102.4	104.4
Gilmer	111	357	746	828	42.1	42.2
Glascock	117	653	718	858	40.6	43.8
Glynn	349	895	1,471	1,582	83.1	80.7
Gordon	225	572	1,048	1,269	59.2	64.7
Grady	195	692	790	993	44.6	50.6
Greene	154	656	787	933	44.5	47.6

Appendix Table 3 (continued)

PER CAPITA INCOME PAYMENTS
BY GEORGIA COUNTIES
1939, 1947, 1954, 1956

County	1939	1947	1954	1956	Percentage of National Per Capita Income 1954	1956
Gwinnett	$ 162	$ 477	$1,197	$1,373	67.6	70.0
Habersham	173	640	1,016	1,244	57.4	63.4
Hall	272	1,032	1,189	1,433	67.2	73.1
Hancock	113	456	601	781	34.0	39.8
Haralson	175	769	1,230	1,473	69.5	75.1
Harris	113	347	887	1,086	50.1	55.4
Hart	139	451	828	1,010	46.8	51.5
Heard	68	327	676	964	38.2	49.2
Henry	159	543	976	1,202	55.1	61.3
Houston	230	632	1,578	1,656	89.2	84.4
Irwin	177	593	594	815	33.6	41.6
Jackson	197	696	916	1,142	51.8	58.2
Jasper	156	593	817	987	46.2	50.3
Jeff Davis	135	456	662	874	37.4	44.6
Jefferson	190	606	691	843	39.0	43.0
Jenkins	188	622	654	844	36.9	43.0
Johnson	151	526	887	1,165	50.1	59.4
Jones	148	461	707	823	39.9	42.0
Lamar	216	646	930	1,044	52.5	53.2
Lanier	161	457	741	873	41.9	44.5
Laurens	177	612	827	1,030	46.7	52.5
Lee	171	570	592	772	33.4	39.4
Liberty	115	431	912	967	51.5	49.3
Lincoln	105	456	570	695	32.2	35.4
Long	100	348	608	721	34.4	36.8
Lowndes	266	777	1,341	1,384	75.8	70.6
Lumpkin	192	---	557	781	31.5	39.8
McDuffie	216	663	952	1,189	53.8	60.6
McIntosh	129	329	727	854	41.1	43.5
Macon	176	772	693	853	39.2	43.5
Madison	116	356	813	1,020	45.9	52.0
Marion	111	438	603	764	34.1	39.0
Meriwether	188	664	796	970	45.0	49.5
Miller	124	713	661	923	37.3	47.1
Mitchell	168	754	711	917	40.2	46.8

Appendix Table 3 (Continued)

PER CAPITA INCOME PAYMENTS
BY GEORGIA COUNTIES
1939, 1947, 1954, 1956

County	1939	1947	1954	1956	Percentage of National Per Capita Income 1954	1956
Monroe	$ 180	$ 597	$ 862	$1,023	48.7	52.2
Montgomery	104	392	517	686	29.2	35.0
Morgan	170	653	857	1,095	48.4	55.8
Murray	103	361	988	1,125	55.8	57.4
Muscogee	426	1,182	1,455	1,522	82.2	77.6
Newton	254	839	1,076	1,291	60.8	65.8
Oconee	119	403	856	1,087	48.4	55.4
Oglethorpe	127	423	652	784	36.8	40.0
Paulding	108	385	1,019	1,247	57.6	63.6
Peach	271	965	1,160	1,057	65.5	53.9
Pickens	132	576	959	1,151	54.2	58.7
Pierce	192	541	797	1,073	45.0	54.7
Pike	142	489	941	1,091	53.2	55.6
Polk	321	871	1,054	1,239	59.5	63.2
Pulaski	214	720	806	1,029	45.5	52.5
Putnam	191	821	948	1,107	53.6	56.5
Quitman	87	419	493	595	27.9	30.3
Rabun	121	378	672	790	38.0	40.3
Randolph	162	673	737	918	41.6	46.8
Richmond	357	970	1,459	1,550	82.4	79.0
Rockdale	191	676	1,106	1,295	62.5	66.0
Schley	159	612	683	851	38.6	43.4
Screven	156	519	576	740	32.5	37.7
Seminole	177	890	840	1,060	47.5	54.1
Spalding	388	1,057	1,313	1,478	74.2	75.4
Stephens	191	838	1,113	1,411	62.9	72.0
Stewart	151	603	638	787	36.0	40.1
Sumter	254	781	809	1,086	51.4	55.4
Talbot	145	459	602	716	34.0	36.5
Taliaferro	111	347	487	607	27.5	31.0
Tattnall	166	501	676	940	38.2	47.9
Taylor	151	611	758	913	42.8	46.6
Telfair	133	479	717	878	40.5	44.8
Terrell	184	736	723	890	40.8	45.4
Thomas	222	731	1,129	1,326	63.8	67.6

Appendix Table 3 (Concluded)

PER CAPITA INCOME PAYMENTS
BY GEORGIA COUNTIES
1939, 1947, 1954, 1956

County	1939	1947	1954	1956	Percentage of National Per Capita Income 1954	1956
Tift	$ 280	$ 876	$ 961	$1,183	54.3	60.3
Toombs	179	646	789	1,003	44.6	51.1
Towns	53	231	708	825	40.0	42.1
Treutlen	132	372	625	810	35.3	41.3
Troup	324	981	1,165	1,268	65.8	64.7
Turner	189	666	652	813	36.8	41.5
Twiggs	131	593	855	1,076	48.3	54.9
Union	59	256	438	522	24.7	26.6
Upson	303	956	1,128	1,319	63.7	67.3
Walker	264	624	1,288	1,436	72.8	73.2
Walton	228	740	958	1,208	54.1	61.6
Ware	316	842	995	1,107	56.2	56.5
Warren	156	529	756	893	42.7	45.5
Washington	166	650	689	862	38.9	44.0
Wayne	188	558	897	1,057	50.7	53.9
Webster	115	637	563	768	31.8	39.2
Wheeler	111	388	509	786	28.8	40.1
White	68	355	768	964	43.4	49.2
Whitfield	359	825	1,203	1,374	68.0	70.9
Wilcox	137	503	640	824	36.2	42.0
Wilkes	147	652	770	958	43.5	48.9
Wilkinson	184	783	963	1,070	54.5	54.6
Worth	156	588	653	882	36.9	45.0

Note: The per capita income figures for 1939 and 1947 were computed by Bureau of Business Research, College of Business Administration, University of Georgia.